PART A

IONOSPHERIC DATA

ISSUED
DECEMBER 1956

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

CRPL-F 148
PART A

NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

Issued
26 Dec. 1956

IONOSPHERIC DATA

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SYMBOLS, TERMINOLOGY, CONVENTIONS

Beginning with data reported for January 1952, the symbols, terminology, and conventions for the determination of median values used in this report (CRPL-F series) conform as far as practicable to those adopted at the Sixth Meeting of the International Radio Consultative Committee (C.C.I.R.) in Geneva, 1951. Excerpts concerning symbols and terminology from Document No. 626-E of this Meeting are given on pages 2-7 of the report CRPL-F89, "Ionospheric Data," issued January 1952. Reprints of these pages are available upon request.

Beginning with data for January 1945, median values are published wherever possible. Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data exist.

The following conventions are used in determining the medians for hours when no measured values are given because of equipment limitations and ionospheric irregularities. Symbols used are those given in Document No. 626-E referred to above, plus an additional symbol, R: "Scaling of characteristic is influenced or prevented by absorption in the neighborhood of the critical frequency," (May 1955). Also, beginning with January 1956, additional meanings are assigned to T: A smoothed value which better fits the observations, replacing a doubtful or clearly inconsistent observed value; and to U: foF2 minus foF1 is 0.5 Mc or less (used with (M3000)F2).

a. For all ionospheric characteristics:

Values missing because of A, C, F, L, M, N, Q, R, S, or T are omitted from the median count.

b. For critical frequencies and virtual heights:

Values of foF2 (and foE near sunrise and sunset) missing because of E are counted as equal to or less than the lower limit of the recorder. Values of h'F2 (and h'E near sunrise and sunset) missing for this reason are counted usually as equal to or greater than the median. Other characteristics missing because of E are omitted from the median count.

Values missing because of G are counted:

1. For foF2, as equal to or less than foF1.
2. For h'F2, as equal to or greater than the median.

The symbol W is included in the median count only when it replaces a height characteristic; the symbol D, only when it replaces a frequency characteristic.

Values missing for any other reason are omitted from the median count.

c. For MUF factor (M-factors):

Values missing because of G or W are counted as equal to or less than the median.

Values missing for any other reason are omitted from the median count.

d. For sporadic E (Es):

Values of fEs missing because of E or G (and B when applied to the daytime E region only) are counted as equal to or less than the median foE, or equal to or less than the lower frequency limit of the recorder.

At night B for fEs is counted on the low side when there is a numerical value of foF2; otherwise it is omitted from the median count.

Values of fEs missing for any other reason, and values of h'Es missing for any reason at all are omitted from the median count.

Beginning with data for November 1945, doubtful monthly median values for ionospheric observations at Washington, D. C., are indicated by parentheses, in accordance with the practice already in use for doubtful hourly values. The following are the conventions used to determine whether or not a median value is doubtful:

1. If the count is four or less, the data are considered insufficient and no median value is computed.

2. For the F2 layer or sporadic E, if the count is from five to nine, the median is considered doubtful. The E and F1 layers are so regular in their characteristics that, as long as the count is at least five, the median is not considered doubtful.

3. For all layers, if more than half of the data used to compute the median are doubtful (either doubtful or interpolated), the median is considered doubtful.

The same conventions are used by the CRPL in computing the medians from tabulations of daily and hourly data for stations other than Washington, beginning with the tables in IRPL-F18.

The tables and graphs of ionospheric data are correct for the values reported to the CRPL, but, because of variations in practice

in the interpretation of records and scaling and manner of reporting of values, may at times give an erroneous conception of typical ionospheric characteristics at the station. Some of the errors are due to:

a. Differences in scaling records when spread echoes are present.

b. Omission of values when foF2 is less than or equal to foF1, leading to erroneously high values of monthly averages or median values.

c. Omission of values when critical frequencies are less than the lower frequency limit of the recorder, also leading to erroneously high values of monthly average or median values.

These effects were discussed on pages 6 and 7 of the previous F-series report IRPL-F5.

Ordinarily, a blank space in the fEs column of a table is the result of the fact that a majority of the readings for the month are below the lower limit of the recorder or less than the corresponding values of foE. Blank spaces at the beginning and end of columns of h'F1, foF1, h'E, and foE are usually the result of diurnal variation in these characteristics. Complete absence of medians of h'F1 and foF1 is usually the result of seasonal effects.

The dashed-line prediction curves of the graphs of ionospheric data are obtained from the predicted zero-muf contour charts of the CRPL-D series publications. The following points are worthy of note:

a. Predictions for individual stations used to construct the charts may be more accurate than the values read from the charts since some smoothing of the contours is necessary to allow for the longitude effect within a zone. Thus, inasmuch as the predicted contours are for the center of each zone, part of the discrepancy between the predicted and observed values as given in the F series may be caused by the fact that the station is not centrally located within the zone.

b. The final presentation of the predictions is dependent upon the latest available ionospheric and radio propagation data, as well as upon predicted sunspot number.

c. There is no indication on the graphs of the relative reliability of the data; it is necessary to consult the tables for such information.

PREDICTED AND OBSERVED SUNSPOT NUMBERS

The following predicted smoothed 12-month running-average Zürich sunspot numbers were used in constructing the contour charts:

Month	Predicted Sunspot Number										
	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947
December		150	42	11	15	33	53	86	108	114	126
November		147	35	10	16	38	52	87	112	115	124
October		135	31	10	17	43	52	90	114	116	119
September		119	30	8	18	46	54	91	115	117	121
August		105	27	8	18	49	57	96	111	123	122
July		95	22	8	20	51	60	101	108	125	116
June		89	18	9	21	52	63	103	108	129	112
May	150*	77	16	10	22	52	68	102	108	130	109
April	150*	68	13	10	24	52	74	101	109	133	107
March	150*	60	14	11	27	52	78	103	111	133	105
February	150*	53	14	12	29	51	82	103	113	133	90
January	150*	48	12	14	30	53	85	105	112	130	88

*This number is believed representative of solar activity at a maximum portion of the current sunspot cycle.

The latest available information follows concerning the corresponding observed Zürich numbers (some of which may be subject to minor change) beginning with the minimum of April 1954.

Observed Sunspot Number

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1954				3	4	4	5	7	8	8	9	12
1955	14	16	19	23	29	35	40	46	55	64	72	80
1956	88	97	108	119	128							

WORLD-WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 51 and figures 1 to 102 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

University of Graz:
Graz, Austria

Meteorological Service of the Belgian Congo and Ruanda-Urundi:
Elisabethville, Belgian Congo
Leopoldville, Belgian Congo

Escola Politecnica, University of Sao Paulo:
Sao Paulo, Brazil

British Department of Scientific and Industrial Research, Radio Research Board:
Falkland Is.
Inverness, Scotland
Singapore, British Malaya
Slough, England

Defence Research Board, Canada:
Baker Lake, Canada
Churchill, Canada
Resolute Bay, Canada
Winnipeg, Canada

Radio Wave Research Laboratories, National Taiwan University, Taipeh, Formosa, China:
Formosa, China

Danish National Committee of URSI:
Godhavn, Greenland

French National Center for Telecommunications Studies:
Djibouti, French Somaliland
Tananarive, Madagascar

National Laboratory of Radio-Electricity (French Ionospheric Bureau):
Casablanca, Morocco
Poitiers, France

Institute for Ionospheric Research, Lindau Uber Northeim, Hannover, Germany:
Lindau/Harz, Germany

Icelandic Post and Telegraph Administration:
Reykjavik, Iceland

Norwegian Defence Research Establishment, Kjeller per Lillestrom, Norway:
Oslo, Norway

Research Institute of National Defence, Stockholm, Sweden:
Kiruna, Sweden
Upsala, Sweden

United States Army Signal Corps:
Ft. Monmouth, New Jersey
Okinawa I.
Thule, Greenland
White Sands, New Mexico

National Bureau of Standards (Central Radio Propagation Laboratory):
Anchorage, Alaska
Fairbanks, Alaska (Geophysical Institute of the University of Alaska)
Huancayo, Peru (Instituto Geofisico de Huancayo)
Maui, Hawaii
Panama Canal Zone
Point Barrow, Alaska
Puerto Rico, W. I.
Talara, Peru (Instituto Geofisico de Huancayo)
Washington, D. C.

HOURLY IONOSPHERIC DATA AT WASHINGTON, D. C.

The data given in tables 52 through 62 follow the scaling practices given in the report IRPL-C61, "Report of International Radio Propagation Conference," pages 36 to 39, and the median values are determined by the conventions given above under "Symbols, Terminology, Conventions." Beginning with September 1949, the data are taken at Ft. Belvoir, Virginia.

The interpretation of a cell is as follows: U F
32

The U is a weight meaning doubtful. Other weights are I, interpolated, D, greater than, and E, less than. Absence of a letter in the upper left position means full weight is given to the observation.

Symbols such as F above are given in the upper right position.

There should be no difficulty in the placing of the decimal point. For the time being, a final zero will be found in each value of foF1 and foE. Thus at a later date it will be possible to register more closely scaled values of these characteristics, whenever such are reported.

EXAMPLES OF IONOSPHERIC VERTICAL SOUNDINGS
COLLEGE, ALASKA; OCT. 15, 1956

The following ionograms were obtained at the Univ. of Alaska, College, Alaska vertical sounding station. They are typical of day and night conditions for October at this geomagnetic latitude. Ionospheric data are scaled directly from these records onto the daily f-plot, a graph of frequency characteristics vs. time. The f-plot for the day represented by these soundings is found on the following page.

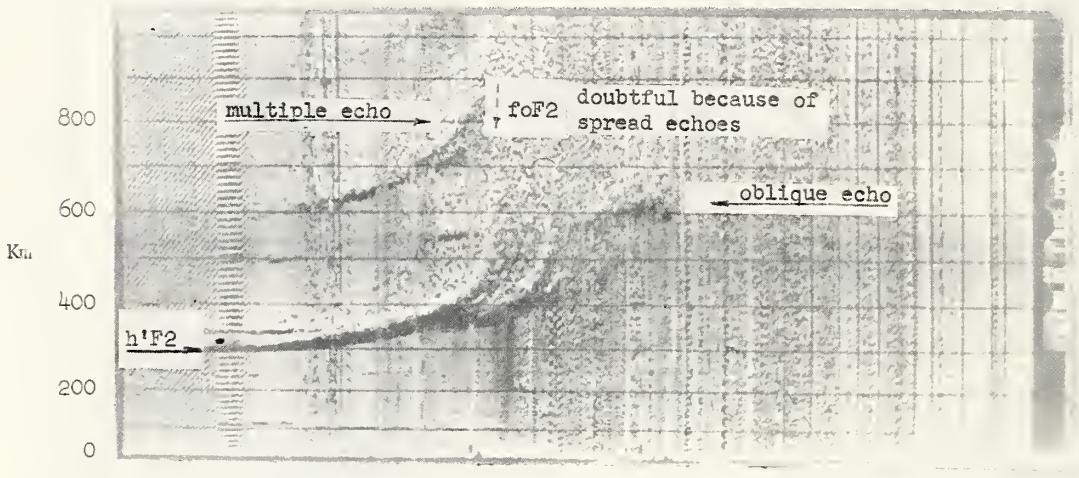


Fig. A. College, Alaska, Oct. 15, 1956, 0100 hours, 150°W time.

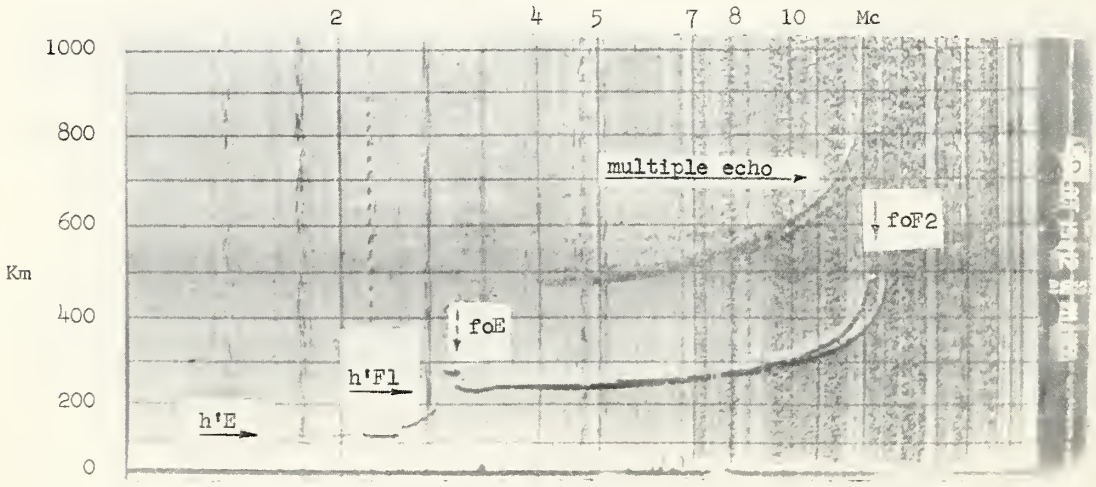
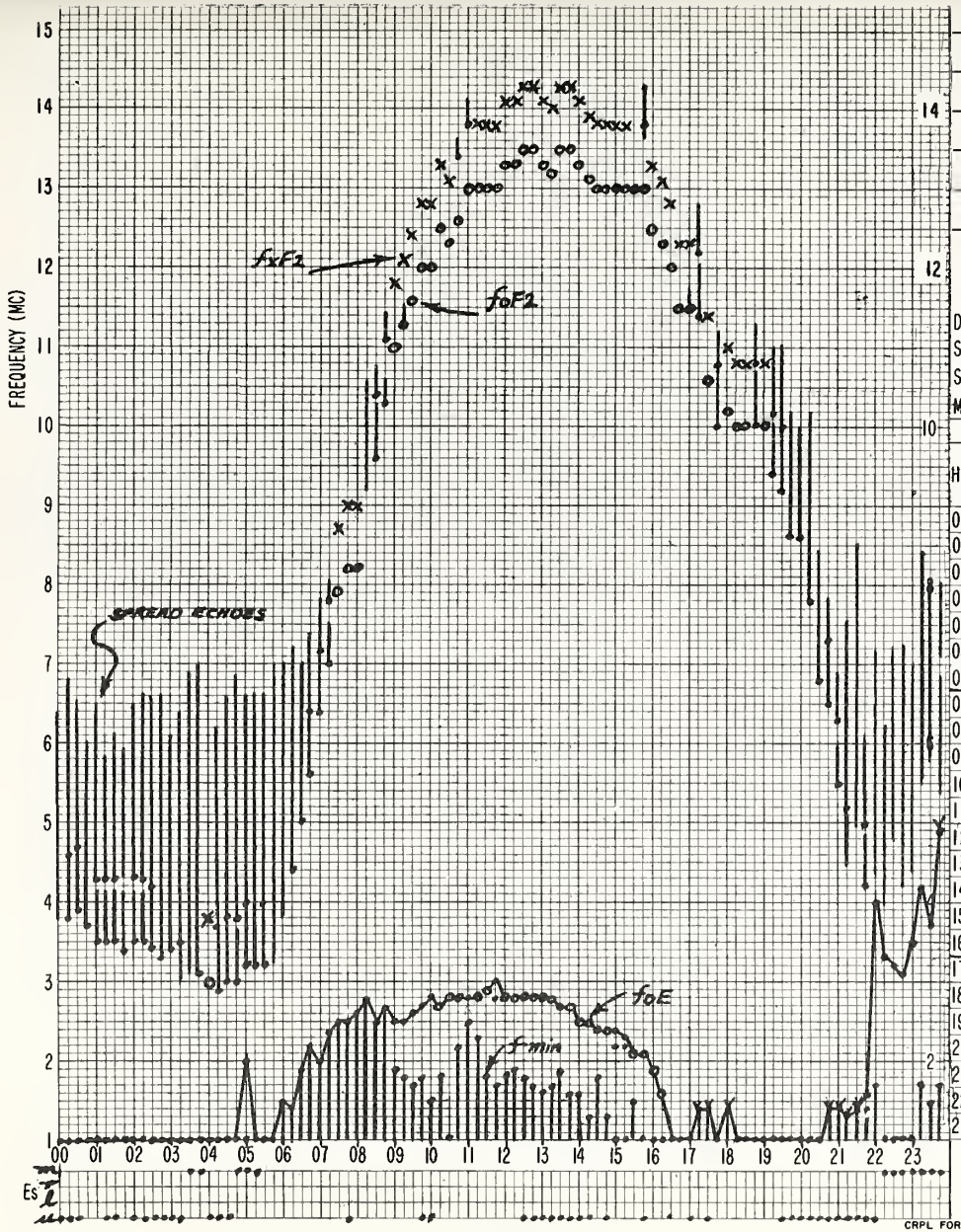


Fig. B. College, Alaska, Oct. 15, 1956, 1200 hours, 150°W time.



f-PLOT

f-PLOT OF
IONOSPHERIC DATA

DATE 15 October 1956

STATION College (FAIRBANKS, ALASKA)

SCALED BY J. L.

MERIDIAN TIME 150° W

UNPLOTTED HOURLY VALUES

HR	F2 M3000	WT	SYM	FI M3000	WT	SYM	h'E	WT	SYM	fEs	SYM
00			F							045	
01	300	2	F								E
02	295	2	F							032	
03	310	2	F							068	
04	270	1								040	
05			F							062	
06			F			L		B			B
07	330	2	F			L		B			B
08	320	1				L		B			B
09	315	1				L	1192	B			G
10	305	1				L		A		029	
11	300	1				L	113	2B			G
12	300	1				L	111	1			G
13	300	1				L	111	1		036	
14	305	1				L	1091			037	
15	300	1				L	1091				G
16	310	1				L	1491				G
17	310	L								062	
18	300	L									S
19	305	1									E
20	315	2	F							050	
21	315	2	F							040	
22			F							046	
23			F							054	

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INDEX OF IONOSPHERIC DATA PUBLISHED IN 1956

(CRPL-F137(A) THROUGH F148(A))

The following index of tables and graphs of ionospheric data published in the CRPL-F(A) series in 1956 is divided into two parts. Part I is an index of data observed in 1955 and 1956. Part II is an index of data observed prior to 1955.

In general, both table and graphs for a given station for a given month appear in the same issue.

Indexes of ionospheric data published prior to 1956 are in IRPL-F17, CRPL-F28, -F40, -F52, -F64, -F76, -F88, -F100, -F112, -F124, and -F136(A).

The following errata published in 1956 refer to publications prior to 1956:

CRPL-F144(A), p. 8, erratum 1, Washington, D. C., March 1946.

CRPL-F144(A), p. 8, erratum 2, Maui, Hawaii, May 30, 1954, to September 16, 1955.

PART 1

Index of Tables and Graphs of Ionospheric Data Observed in 1955 and 1956 and Published in 1956 (CRPL-F137(A) through F148(A))

Station	1955												1956											
	J	F	M	A	M	J	Jy	A	S	O	N	D	J	F	M	A	M	J	Jy	A	S	O	N	
Adak, Alaska											137	139	139	140	141	142	143	145	145	147	147			
Ahmedabad, India					137	138	141	141	142															
Akita, Japan									137	139	139	141	141	143	144	146	146							
Anchorage, Alaska									137	137	138	139	139	141	141	143	145	148	148	148				
Baguio, P. I.									137	138	139	139	142	142	143	144	145	146	146					
Baker Lake, Canada										138	140	140	140	142	143	146	148							
Bombay, India					137	138	141	141	142															
Brisbane, Australia			137	140	139	138	139	140	140	142	142													
Budapest, Hungary													145	145	145									
Buenos Aires, Argentina										138	140	141	142	143	145	145	146							
Calcutta, India					137	138	141	141	142															
Canberra, Australia			137	141	139	138	139	140	140	142	142													
Capetown, Union of S. Africa							137	137	138	139	140	141	141	143	143	146	146							
Casablanca, Morocco	146	144	145	146	148	146	146			148														
Christchurch, New Zealand									139	139	142	142	142		147	147								
Churchill, Canada										138	140	140	140	141	144	146[a]	148							
De Bilt, Holland										138	139	141	140	142	145	145	146	145						
Decepcion I.								137	137	137				143	144	145								
Delhi, India					137	138	141	141	142															
Elisabethville, Belgian Congo										138	139	140	140	141	143	146	148							
Fairbanks, Alaska									138	138	138	138	139	140	141	143	145	146	147	148	148	148		
Falkland Is.					138	138	139	139	142	142	143	144	144	144	148	147								
Formosa, China											137	138	139	140	141	142	143	145	146	146	147	148		
Ft. Monmouth, New Jersey											137	138	139	140	141	142	143	144	145	146	147	148		
Godhavn, Greenland						138	141	138	139	139	146	146	147	147	147	147	147	148	148					
Graz, Austria											137	138	139	140	141	142	143	144	145	146		148		
Guam I.											137	138	139	140	141	143								
Hobart, Tasmania			137	141	139	138	139	140	140	142	142													
Huancayo, Peru										138	140	140	141	141	143	143	146	145	146	148		148		
Ibadan, Nigeria				139	139	142	142	142	142	144	147	147												
Inverness, Scotland						138	138	139	139	142	142	143	144	144	147	148								
Johannesburg, Union of S. Africa							137	137	138	139	140	141	141	143	143	146	146							
Kiruna, Sweden									138[b]					141	141	142	148	148						
Kodaikanal, India									142															
Leopoldville, Belgian Congo										138	139	140	140	141	143	146	148							
Lindau/Harz, Germany									139	140	140	140	141	143	143	146	148							
Lulea, Sweden					147	144	145	142					142	142										
Madras, India					137	138	141	141	142															
Maui, Hawaii											137	138	139	140	141	143	144	145	145	147	147	148		
Nairobi, Kenya							137	138	139	139	141	142		143	145	146								
Narsarssuak, Greenland											137	139	139	140	141	143	144	145	145	147	147			
Okinawa I.											138	138	139	140	141	142	143	144	145	146	147	148		
Oslo, Norway											137	138	139	140	141	142	144	144	145	146	148	148		
Ottawa, Canada										137	140	140	140	141	144	146	145							
Panama Canal Zone											137	138	139	140	141	142	144	145	145	146	147	148		

PART I (CONTINUED)

Station	1955												1956											
	J	F	M	A	M	J	Jy	A	S	O	N	D	J	F	M	A	M	J	Jy	A	S	O	N	
Point Barrow, Alaska							137	138	139	144	143	143	143	142	142	144	146	147			148			
Poitiers, France	146	144	145	146	148	146	146			148														
Port Lockroy					138	138	142	142	142	143	144	144	144											
Puerto Rico, W. I.											137	138	139	140	141	143	144	145	145	146	147	148		
Rarotonga I.						137	137	139	139	139	142													
Resolute Bay, Canada										139	140	140	140	141	144	146	148							
Reykjavik, Iceland									137	137	138	140	140	143	145	145	145	145	148	148	148			
San Francisco, California									137	138	140	141	142	143	147	144	146	146	147	147				
Sao Paulo, Brazil				137	137	137	145	145	145								148							
Schwarzenburg, Switzerland										137[c]	138	139	140	141	143	146			146					
Singapore, British Malaya						138	138	139	139	142	142	143	144	144	147	148								
Slough, England						138	138	139	139	142	142	143	144	144	147	148								
Talara, Peru				146	146					138	140	140	141	141	143	143	144	146	146			148		
Thule, Greenland														142	145	145	146	148	148	147	148			
Tiruchy, India					137	138	141	141	142															
Tokyo, Japan									137	139	139	141	141	143	144	146	146							
Townsville, Australia			137	141	139	138	139	140	140	142	142													
Tromso, Norway											137[d]	138	139	140	141	143	144	144						
Upsala, Sweden											137	138	139	140	141	142	143	147	145	147	147	148		
Wakkanai, Japan									137	139	139	141	141	143	144	146	146							
Washington, D. C.												137	138	139	140	141	142	143	144	145[e]	146	147	148	
Watheroo, W. Australia									137	137	138	139	142	142	143	146	146	146						
White Sands, New Mexico											137	140	139	140	141	142	144	144	145	146	147	148		
Winnipeg, Canada										138	140	140	140	141	145	144	148							
Yamagawa, Japan									137	139	139	141	141	143	144	146	146							

[a]See erratum in F147(A), p. 7.

[b]See erratum 1 in F139(A), p. 8.

[c]See erratum 1 in F138(A), p. 8.

[d]See erratum 2 in F138(A), p. 8.

[e]See erratum in F146(A), p. 8.

PART II

Index of Tables and Graphs of Ionospheric Data Observed Prior to 1955 and Published in 1956 (CRPL-F137(A) through F148(A))

Station	1954												1953											
	J	F	M	A	M	J	Jy	A	S	O	N	D	J	F	M	A	M	J	Jy	A	S	O	N	D
Djibouti, French Somaliland																			145	144	147	148	144	144
Fribourg, Germany	144	144	144	144																				
Macquarie I.		144	144	144	144	144	144	144	144	144	143	143												
Tananarive, Madagascar	143	143	143	143	143	143	145	147	147	148														

	1952												1951											
Campbell I.													141	141	143	143	143	138	139	139	139	139		
Leopoldville, Belgian Congo				148					147															

	1950											
Campbell I.				143	143	141	141	141	141	139	141	141

Table 1

Washington, D. C. (38.7°N, 77.1°W) November 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	6.3						2.80
01	260	6.0						2.80
02	260	5.8						2.80
03	270	5.6						2.80
04	270	5.4						2.80
05	270	5.0						2.80
06	260	4.8					3.1	2.90
07	240	7.0	230	---	109	(1.9)		3.10
08	240	10.5	230	---	111	2.5		3.20
09	240	12.2	220	---	109	3.0		3.10
10	240	13.0	220	---	107	3.3		3.00
11	240	13.5	220	---	109	3.5		2.95
12	(240)	13.6	220	---	109	3.5	3.5	2.85
13	(240)	13.4	225	---	109	3.5		2.80
14	(240)	13.2	230	---	109	3.3		2.85
15	250	13.2	230	---	110	2.9	3.0	2.80
16	230	12.8	230	---	113	2.4	2.5	2.85
17	240	12.0	220	---				2.90
18	230	10.8					2.4	2.90
19	230	9.4						2.90
20	240	8.6						2.90
21	240	7.6						2.95
22	250	7.2						2.90
23	250	6.8						2.80

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 2

Fairbanks, Alaska (64.9°N, 147.8°W) October 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		(4.8)					5.8	(2.75)
01		(5.3)					6.0	(2.75)
02		(4.5)					5.8	(2.70)
03		(5.6)					6.4	(2.70)
04		(5.8)					5.5	(2.70)
05		(4.9)					6.3	(2.75)
06		(4.7)					5.3	(2.80)
07		(5.6)		---	119	---	4.5	(3.00)
08		(6.8)		---	115	2.2	4.4	(3.10)
09		7.3		---	107	2.5	3.4	3.10
10		7.9		---	110	2.7	4.4	3.05
11		8.8		---	111	2.7		3.00
12		9.2		---	109	2.8	3.8	2.90
13		9.8		---	109	2.8		2.90
14		10.5			109	2.5	3.2	2.95
15		10.8			109	2.2		3.00
16		10.4			113	1.9	2.4	3.00
17		9.4			---	---		3.00
18		8.4					4.0	3.00
19		6.8					3.8	3.05
20		(6.0)					4.5	(3.05)
21		(4.6)					4.4	(3.05)
22		(4.4)					4.6	(3.00)
23		(4.5)					5.2	(2.95)

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 3

Oslo, Norway (60.0°N, 11.1°E) October 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	295	5.55					<1.4	2.60
01	300	5.20					<1.2	2.50
02	290	4.50					1.3	2.50
03	290	4.45					1.6	2.50
04	290	4.40					1.5	2.60
05	280	4.10					<1.4	2.55
06	270	4.30			---	----	<1.4	2.65
07	250	5.90	---	---	130	1.75		2.90
08	240	7.90	250	---	120	2.30		3.00
09	250	9.50	240	---	100	2.60	2.7	3.00
10	(240)	10.75	240	---	100	2.80	3.1	3.00
11	---	11.90	235	---	110	2.90	3.3	3.00
12	---	12.40	235	---	110	2.90	3.1	2.85
13	(240)	12.20	240	---	100	3.00		2.90
14	(235)	12.30	240	---	100	2.90		2.95
15	240	12.10	245	---	100	2.65		2.95
16	240	11.35	245	---	110	2.30		3.00
17	230	10.75	---	---	105	1.90		3.05
18	230	9.20					<1.6	2.90
19	235	8.25					<1.6	2.90
20	240	7.90					<1.6	2.80
21	245	6.60					<1.6	2.70
22	290	6.00					<1.6	2.55
23	285	6.05					<1.6	2.65

Time: 15.0°E.
Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 4

Upsala, Sweden (59.8°N, 17.6°E) October 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	315	4.9					2.5	2.7
01	320	4.8					2.6	2.7
02	325	4.4					2.3	2.7
03	315	3.7					2.5	2.8
04	305	3.9					2.4	2.8
05	290	3.8			---	E	2.5	2.8
06	260	4.9			---	E	2.7	2.9
07	245	6.9	---	---	140	1.80	2.7	3.0
08	240	8.8	---	---	115	2.30	3.0	3.1
09	245	9.8	245	(4.0)	110	2.65	3.7	3.1
10	245	12.0	240	4.3	110	2.85	4.0	3.0
11	240	12.5	235	(4.6)	110	2.95	3.9	3.0
12	240	13.1	240	(5.0)	110	3.00	3.3	2.9
13	240	13.5	240	(5.0)	110	3.00	3.5	2.9
14	230	13.3	245	---	110	2.80		3.0
15	235	13.0	---	---	115	2.45		3.0
16	230	12.2			130	2.00	2.5	3.0
17	225	11.0			---	E	2.3	3.1
18	235	9.3			---	E	2.4	3.1
19	240	8.2					2.4	3.0
20	240	7.0						2.95
21	250	5.8					1.8	2.9
22	290	5.2					2.2	2.8
23	300	5.1					2.0	2.8

Time: 15.0°E.
Sweep: 1.4 Mc to 17.0 Mc in 6 minutes, automatic operation.

Table 5

Graz, Austria (47.1°N, 15.5°E) October 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	310	6.3						
01	305	6.0						
02	320	6.0						
03	310	6.0						
04	300	5.6						
05	285	5.0						
06	270	5.9						
07	230	8.1						
08	230	9.3	---	---				
09	220	0	210	---				
10	220	0	215	---		(3.6)	3.8	
11	230	0	210	---		---	3.8	
12	230	0	220	---		(3.6)		
13	220	D	220	---		(3.7)		
14	230	D	---	---				
15	230	D				(3.3)		
16	230	0						
17	230	D						
18	230	9.1						
19	240	8.5						
20	250	7.4						
21	280	6.8						
22	300	6.7						
23	300	6.6						

Time: 15.0°E.
Sweep: 2.5 Mc to 11.0 Mc in 2 minutes.

Table 6

Ft. Monmouth, New Jersey (40.3°N, 74.1°W) October 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	7.0						2.75
01	270	6.5					(2.5)	2.70
02	260	6.4					(3.1)	2.75
03	260	6.0					(2.3)	2.80
04	260	5.5					(4.0)	2.80
05	270	5.2						2.75
06	260	5.9	---	---				2.90
07	230	8.8	230	---	117	2.4		3.15
08	240	11.0	230	---	111	2.8		3.15
09	240	12.0	220	---	109	3.2		3.05
10	230	12.5	210	---	109	3.4		3.00
11	240	12.7	215	---	109	3.6		2.90
12	250	13.0	220	---	105	3.6		2.85
13	240	12.8	225	---	111	3.5		2.80
14	250	12.6	230	---	113	3.4		2.80
15	240	12.7	230	---	115	3.2		2.80
16	240	12.5	240	---	118	2.6		2.90
17	230	11.8	---	---	125	---		2.90
18	230	10.6					(1.7)	2.90
19	230	9.1					(3.0)	2.85
20	240	8.2					(2.9)	2.80
21	260	7.6					(3.2)	2.80
22	270	7.4						2.75
23	270	7.2					(2.8)	2.75

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 7

White Sands, New Mexico (32.3°N, 106.5°W) October 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	5.6					2.1	2.80
01	260	5.5					2.6	2.70
02	270	5.4					1.7	2.80
03	260	5.2					3.3	2.80
04	270	5.0					3.8	2.65
05	270	4.9					2.7	2.70
06	270	5.9					2.8	2.85
07	230	9.4	---	---	115	(2.5)		3.30
08	230	11.3	230	---	109	(3.0)	3.6	3.20
09	240	12.5	220	---	109	(3.3)	3.6	3.10
10	250	12.7	210	---	109	(3.6)	3.8	2.95
11	(270)	13.0	215	---	109	(3.9)	3.9	2.90
12	(290)	13.2	220	---	109	(3.9)		2.80
13	(300)	13.4	230	---	111	(3.8)		2.75
14	(290)	13.1	230	---	111	(3.6)	3.6	2.75
15	(290)	13.1	235	---	111	(3.4)	3.5	2.80
16	240	12.9	240	---	113	(2.9)	3.5	2.85
17	230	12.4			117	---	3.3	2.90
18	220	11.0					3.2	2.95
19	220	9.0					3.2	2.90
20	<240	8.0					2.8	2.90
21	240	6.8					3.7	2.85
22	250	6.4					(3.1)	2.85
23	<260	6.0					2.9	2.85

Time: 105.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 8

Okinawa I. (26.3°N, 127.8°E) October 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	13.7						2.95
01	240	12.8						3.00
02	230	10.6						2.95
03	230	9.5						3.00
04	220	7.4						3.10
05	240	5.8						2.75
06	260	5.6						2.80
07	240	9.7			(122)	---	4.0	3.20
08	240	11.8	230	---	109	(3.0)	4.5	3.20
09	---	12.9	230	---	(109)	(3.4)	5.0	3.00
10	---	14.3	220	---	109	(3.7)	5.2	2.90
11	---	14.6	220	---	111	(3.8)	5.6	2.80
12	---	15.7	220	---	(111)	(3.9)	5.4	2.70
13	(360)	16.4	225	---	111	(3.9)	5.6	2.65
14	350	17.0	240	---	111	(3.8)	5.5	2.65
15	(340)	16.8	240	---	111	(3.6)	5.8	2.65
16	---	16.5	245	---	111	(3.3)	5.3	2.70
17	(250)	16.3	250	---	113	(2.6)	4.9	2.80
18	250	16.1					4.4	2.80
19	250	16.7					3.2	2.70
20	260	18.4					3.2	2.70
21	250	18.6					2.8	2.80
22	240	16.6					2.7	2.90
23	240	13.7						2.80

Time: 135.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 9

Formosa, China (25.0°N, 121.5°E) October 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	>15.5					2.4	(2.9)
01	240	(13.5)					2.4	(2.85)
02	220	11.0					2.4	2.8
03	240	(9.5)					2.5	(2.8)
04	240	(9.4)					2.4	(3.0)
05	240	(8.8)					2.5	(3.0)
06	240	(9.2)					2.5	(3.0)
07	240	9.6			---	---	2.7	(3.05)
08	220	12.4	---	---	110	3.2	4.0	3.05
09	(230)	14.0	220	---	100	3.5	4.6	2.9
10	---	15.1	220	---	100	3.8	4.8	2.8
11	---	16.0	220	---	---	---	4.8	2.7
12	(280)	17.2	220	---	---	---	4.2	2.6
13	---	17.6	220	---	---	---		2.6
14	---	>18.5	240	---	---	---		2.65
15	---	18.7	240	---	---	---	3.9	2.7
16	(240)	18.0	240	---	120	3.2	4.0	2.7
17	250	17.5	240	---			4.0	2.8
18	260	(17.7)					3.8	(2.7)
19	280	>18.2					3.7	(2.7)
20	270	>19.0					3.1	(2.7)
21	240	(19.2)					3.0	(2.9)
22	240	(19.5)					(2.7)	(2.8)
23	240	17.0					2.5	(2.9)

Time: 120.0°E.
Sweep: 1.1 Mc to 19.5 Mc in 15 minutes, manual operation.

Table 10

Maui, Hawaii (20.8°N, 156.5°W) October 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	230	9.7						3.10
01	230	8.8						3.05
02	240	7.1						3.00
03	240	5.7						3.00
04	260	4.7						2.80
05	280	4.2						2.70
06	320	4.6						2.60
07	250	8.8			127	2.3		3.10
08	240	11.6	240	---	116	3.0	3.6	3.15
09	(260)	12.7	230	---	111	3.4	4.2	3.00
10	---	13.4	225	---	111	3.7	4.2	2.90
11	(300)	14.0	220	---	111	3.8	4.5	2.90
12	350	14.6	220	---	111	4.0	4.0	2.80
13	350	15.4	230	7.2	111	3.9	4.3	2.75
14	350	15.5	240	---	111	3.8	4.1	2.75
15	330	15.4	240	---	111	3.5	4.3	2.80
16	(300)	14.9	240	---	113	3.2	4.5	2.80
17	250	14.0	250	---	119	2.6	4.3	2.85
18	250	13.0					4.2	2.95
19	250	13.0					3.5	3.00
20	250	13.0					2.4	3.00
21	240	13.0					2.4	3.00
22	240	12.5						3.10
23	230	11.0						3.10

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 11

Puerto Rico, W. I. (18.5°N, 67.2°W) October 1956

Time	h'F2	foF2	b'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	8.3						2.90
01	250	7.8						3.00
02	240	7.0						3.10
03	230	5.8					(2.4)	2.90
04	240	4.8					(3.0)	2.70
05	290	4.4						2.60
06	280	5.0						2.80
07	240	9.0			(127)	(2.2)		3.20
08	240	11.1	235	---	116	3.0		3.15
09	240	12.7	230	---	113	3.5		3.05
10	(260)	13.3	230	---	111	3.8		3.00
11	(270)	13.2	225	---	111	3.9		2.90
12	---	13.0	225	---	111	4.0		2.80
13	---	13.0	230	---	111	4.1		2.75
14	---	13.0	230	---	111	3.9	5.2	2.75
15	---	12.7	235	---	111	3.6	4.9	2.70
16	(250)	12.1	240	---	113	3.2	4.5	2.70
17	240	11.7	245	---	(119)	2.6	4.1	2.75
18	240	11.1			---	<2.0	3.1	2.80
19	240	10.3					3.2	2.80
20	250	9.5					3.1	2.80
21	270	9.3					2.9	2.70
22	270	9.0						2.80
23	250	8.6						2.85

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 12

Panama Canal Zone (9.4°N, 79.9°W) October 1956

Time	h'F2	foF2	b'F1	foF1	h'E	foE	fEs	(M3000)F2
00	230	9.2						3.20
01	230	8.0						3.25
02	220	6.1						3.15
03	240	4.8					(2.2)	2.90
04	250	4.1						2.80
05	280	3.8					3.4	2.70
06	310	5.6					3.5	2.70
07	240	9.8	---	---	117	2.6	3.2	3.15
08	240	12.3	235	---	111	3.2		3.10
09	---	13.8	230	---	109	3.7	3.7	3.00
10	---	14.0	220	---	109	4.0	4.8	2.85
11	---	14.1	220	---	109	4.1	4.9	2.75
12	(340)	14.4	220	---	109	4.2	5.0	2.70
13	370	14.4	225	---	107	4.1	5.1	2.65
14	370	14.2	230	---	107	4.0	5.4	2.60
15	370	14.2	235	---	107	3.7	5.4	2.60
16	350	14.3	245	---	109	3.2	5.2	2.60
17	---	13.8	<250	---	113	2.6	4.7	2.70
18	260	13.4					4.2	2.85
19	260	12.4					3.7	2.90
20	240	12.1					3.0	2.90
21	230	11.7					2.8	2.90
22	240	10.9					2.6	2.90
23	240	10.6						3.05

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 13

Talara, Peru (4.6°S, 81.3°W) October 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	220	11.6					4.5	2.90
01	220	10.4					4.2	3.00
02	230	9.2					3.2	3.00
03	230	8.0					2.4	3.00
04	230	6.9					3.0	3.20
05	240	5.5					3.1	3.10
06	270	6.0			---	---	2.2	2.90
07	260	10.5			123	2.6	3.3	3.05
08	240	13.3	240	---	119	3.3	3.6	2.90
09	---	14.5	230	---	119	3.7		2.75
10	---	14.4	220	---	114	4.0		2.50
11	---	14.8	215	---	115	4.1		2.35
12	---	14.5	215	---	115	4.2	5.0	2.20
13	---	(13.5)	210	---	113	4.2	4.5	(2.15)
14	---	(12.8)	210	---	113	4.0	4.2	(2.10)
15	(220)	(12.8)	210	---	113	(3.8)	4.6	(2.15)
16	240	(12.7)	---	---	111	3.3	4.4	(2.15)
17	260	(12.6)			119	2.8	3.4	(2.20)
18	290	(12.8)					4.6	(2.30)
19	350	(12.2)					3.3	(2.25)
20	400	(11.8)					2.1	(2.25)
21	320	(12.5)					3.4	(2.40)
22	260	(12.5)					3.2	(2.75)
23	230	12.8					3.9	(2.85)

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 14

Huancayo, Peru (12.0°S, 75.3°W) October 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	230	10.3					(5.1)	2.80
01	230	8.9					4.6	2.90
02	230	8.2					5.6	3.00
03	230	7.5						3.00
04	230	6.9						3.15
05	230	5.8						3.15
06	260	8.6			125	2.0	3.6	3.10
07	240	11.9			111	3.0	6.0	3.05
08	(230)	13.6	225	---	109	3.5	9.4	2.85
09	---	14.5	215	---	---	---	13.2	2.60
10	---	14.8	210	---	---	---	13.5	2.30
11	---	13.6	205	---	---	---	14.0	2.10
12	---	12.5	200	---			14.0	2.10
13	---	12.4	200	---			14.0	2.05
14	---	12.1	200	---			13.7	2.05
15	---	12.0	215	---			13.0	2.10
16	240	11.8	230	---			10.9	2.15
17	260	11.6					8.8	2.20
18	300	11.4					3.5	(2.20)
19	420	10.2						2.05
20	430	9.2						2.05
21	370	9.2						2.30
22	280	10.2						2.50
23	260	10.5						2.75

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 15

Thule, Greenland (77.0°N, 69.0°W) 5september 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		(5.2)						(2.65)
01		(5.5)						(2.70)
02		(4.9)						(2.60)
03		(5.0)						(2.75)
04		5.0			---	---		2.85
05		5.4			---	---		(2.80)
06		5.9		---	121	(2.0)		(2.90)
07		6.1		---	130	(2.2)		2.80
08		6.4		3.8	121	(2.6)		2.80
09		6.6		4.1	119	(2.6)		2.70
10		6.9		4.1	117	2.8		2.80
11		6.4		(4.4)	115	2.8		2.70
12		6.6		4.5	114	2.6		2.70
13		6.4		4.3	118	2.6		2.70
14		6.6		4.2	121	2.5		2.65
15		6.7		(4.0)	129	2.5		2.70
16		6.8		---	125	2.4		2.70
17		6.8		---	129	2.2		2.70
18		6.8		---	---	---		2.70
19		6.3		---				2.70
20		6.6		---				(2.70)
21		6.5		---				(2.65)
22		6.2		---				2.70
23		6.0						(2.70)

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 16

Point Barrow, Alaska (71.3°N, 156.8°W) September 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		(4.2)					5.0	(2.85)
01		(4.0)					4.8	----
02		(4.8)					5.0	(2.70)
03		(4.8)					3.8	(2.60)
04		(4.1)					3.4	----
05		(4.9)			---	---	3.0	(2.50)
06		(4.8)		---	---	---	2.5	2.60
07		4.9		---	115	2.2	2.7	2.75
08		5.5		(3.6)	109	2.6	3.1	2.80
09		6.1		(4.1)	109	2.9		2.80
10		6.3		4.2	108	2.8		2.70
11		6.5		4.4	111	3.0		2.75
12		6.7		(4.4)	107	3.0		2.80
13		6.9		4.7	103	3.1		2.75
14		7.2		(4.5)	105	3.0		2.80
15		7.6		(4.4)	105	2.9		2.80
16		7.6		---	111	2.6		2.85
17		7.6		---	111	2.4		2.90
18		6.7			117	2.2		2.90
19		6.0			---	---	2.5	2.95
20		5.4			---	---	2.5	2.95
21		4.8					3.7	2.90
22		(4.2)					4.1	2.75
23		(4.0)					5.0	(2.70)

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 17

Fairbanks, Alaska (64.9°N, 147.8°W) 5september 1956

Time	h'F2	foF2	b'F1	foF1	h'E	foE	fEs	(M3000)F2
00		(5.0)					4.5	(2.85)
01		(4.7)					4.8	(2.75)
02		(4.5)					5.0	(2.80)
03		(5.2)					5.0	(2.70)
04		(5.0)					5.2	(2.75)
05		(5.2)			---	---	5.4	(2.80)
06		(5.4)		---	107	2.2	4.5	(3.00)
07		5.8		---	112	2.5	3.9	2.90
08		6.2		4.0	111	2.7	4.0	2.85
09		6.4		4.4	107	3.0	3.7	2.80
10		6.8		4.6	105	3.2		2.75
11		6.8		4.6	103	3.2		2.70
12		7.3		4.8	104	3.2		2.80
13		7.2		4.7	105	3.2	3.4	2.80
14		7.6		4.8	109	3.1		2.80
15		7.8		---	111	2.9		2.80
16		8.0		---	111	2.7		2.90
17		7.6			121	(2.2)		3.00
18		7.6			121	2.1	2.5	3.00
19		7.1			---	---	3.0	3.00
20		(6.2)					3.7	(3.00)
21		(5.6)					4.5	(3.00)
22		(4.9)					4.5	(3.00)
23		(4.2)					4.5	(2.90)

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 18

Reykjavik, Iceland (64.1°N, 21.8°W) 5september 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		---					4.2	----
01		---					4.3	----
02		---					3.9	----
03		---					4.0	----
04		(3.6)					4.0	(2.60)
05		(4.7)					2.6	(2.80)
06		5.2			---	---		2.90
07		6.0			116	---		3.00
08		6.4			111	(2.7)		3.00
09		7.0		---	111	(3.0)		2.90
10		7.2		---	111	(3.1)		2.85
11		7.8		4.8	111	(3.2)		2.85
12		8.0		4.8	109	(3.2)		2.80
13		8.0		---	108	3.2		2.75
14		8.0		---	109	3.2		2.75
15		8.3		---	111	3.0		2.80
16		7.7		---	111	(3.0)		2.90
17		7.2		---	112	2.9		2.85
18		(7.6)			111	2.8		(2.90)
19		(6.8)			---	---	2.5	(2.90)
20		(6.2)					3.4	(2.70)
21		(4.5)					3.7	(2.50)
22		(4.2)					3.8	(2.50)
23		(4.9)					4.1	(2.50)

Time: 15.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 19

Oslo, Norway (60.0°N, 11.1°E) — September 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	5.20					<1.4	(2.50)
01	300	5.10					1.4	2.40
02	300	4.40					1.4	2.45
03	320	3.95					2.0	2.45
04	310	3.70					2.5	2.40
05	290	3.80			---	----	<1.4	2.60
06	260	4.80	275	----	115	1.70	2.0	2.85
07	250	6.40	250	----	110	2.30	2.6	2.90
08	(470)	6.90	240	4.15	110	2.65	3.2	2.80
09	(540)	7.40	240	----	110	3.00	3.4	2.90
10	---	8.00	235	----	105	3.20	3.9	2.80
11	---	8.00	235	----	105	3.25	3.7	2.75
12	(455)	8.25	235	5.20	105	3.35	3.6	2.75
13	(455)	8.80	235	5.10	105	3.40	3.5	2.75
14	---	9.05	240	----	105	3.30		2.80
15	---	8.65	240	----	105	3.10	<3.5	2.80
16	---	8.90	245	----	100	2.90	3.2	2.80
17	(240)	8.20	250	----	110	2.50		2.75
18	250	8.00	250	----	125	2.15	2.6	2.85
19	250	8.10	---	----	---	----	1.6	2.85
20	245	7.55					<1.6	2.75
21	250	6.60					<1.6	2.75
22	260	6.10					<1.6	2.65
23	300	5.60					<1.6	(2.55)

Time: 15.0°E.
Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 20

Fairbanks, Alaska (64.9°N, 147.8°W) — August 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		(4.7)					4.8	(2.90)
01		(4.9)					5.8	(2.70)
02		(4.6)					4.6	(2.80)
03		(4.8)					5.2	(2.75)
04		(5.0)			---	---	5.4	(2.75)
05		(5.8)		(3.7)	---	2.1	5.4	(2.75)
06		(5.9)		4.0	106	2.7	5.3	(2.65)
07		6.2		(4.2)	110	(2.8)	6.3	2.65
08		6.4		4.5	106	3.1	5.8	2.70
09		6.3		4.7	104	3.3	5.0	2.70
10		6.2		4.8	103	3.4	6.0	2.70
11		6.1		4.8	103	3.4	4.8	2.55
12		6.0		5.0	109	3.4	4.7	2.50
13		6.2		4.9	109	3.4	4.1	2.65
14		6.2		4.8	107	3.4	4.4	2.60
15		6.2		(4.9)	109	3.3	3.6	2.70
16		6.2		(4.6)	109	(3.1)	3.5	2.75
17		6.4		---	111	(2.8)	4.1	2.80
18		6.2			117	2.6	3.7	2.90
19		(6.4)			121	2.4	3.8	(3.00)
20		(6.2)			---	---	3.9	(2.95)
21		(5.4)					4.3	(3.00)
22		(5.4)					4.4	(3.00)
23		(4.9)					4.4	(2.90)

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 21

Reykjavik, Iceland (64.1°N, 21.8°W) — August 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		(4.8)					4.4	(2.55)
01		(4.7)					4.9	(2.60)
02		(5.0)					5.0	(2.70)
03		4.5					4.4	(2.65)
04		(4.9)					3.9	(2.80)
05		5.3					3.7	2.90
06		5.4		---	111	2.5	2.8	2.95
07		6.0		4.3	111	2.8		2.90
08		6.2		4.4	109	(3.1)		2.90
09		6.5		4.8	107	3.2		2.90
10		6.6		4.9	101	3.4		2.85
11		6.9		5.0	101	3.5		2.80
12		6.9		5.0	101	3.5		2.75
13		7.0		(5.0)	101	3.5		2.75
14		7.0		5.0	101	3.5		2.70
15		7.0		5.0	103	3.5		2.75
16		7.0		4.8	105	3.3		2.80
17		6.8		---	109	(3.1)		2.85
18		6.7		---	108	3.0	3.2	2.90
19		(6.3)			120	---	3.6	(2.90)
20		(5.8)			---	---	3.7	(2.90)
21		(5.4)					3.7	(2.75)
22		(5.0)					4.0	(2.75)
23		(3.7)					4.1	(2.50)

Time: 15.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 22

Anchorage, Alaska (61.2°N, 149.9°W) — August 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		(4.2)					3.5	(2.60)
01		(4.1)					3.7	(2.55)
02		4.0					3.4	2.55
03		4.2					3.8	2.55
04		4.4		---	---	---	2.4	2.60
05		5.0		(3.5)	120	2.0	2.0	2.55
06		5.6		3.8	117	(2.5)		2.60
07		5.8		4.2	115	(2.7)		2.50
08		6.0		4.4	111	3.0	3.2	2.50
09		6.2		4.6	111	(3.1)	3.2	2.50
10		6.4		4.8	111	(3.3)	3.4	2.50
11		6.2		4.8	111	(3.5)		2.50
12		6.3		5.0	111	3.5	3.5	2.50
13		6.4		5.0	111	(3.4)		2.50
14		6.3		5.0	111	3.4	3.4	2.50
15		6.4		4.8	111	(3.3)		2.60
16		6.3		4.7	115	3.1		2.70
17		6.4		(4.4)	117	2.8		2.80
18		6.3		---	121	2.4	2.7	2.85
19		6.1			---	(2.0)	2.6	2.85
20		5.8			---	---	2.0	2.85
21		5.6					1.1	2.80
22		4.9					2.5	2.70
23		4.5					1.8	2.70

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 23

Huancayo, Peru (12.0°S, 75.3°W) — August 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	220	8.2						3.05
01	220	7.4						3.10
02	220	6.7						3.20
03	230	6.0						3.15
04	230	5.1						3.20
05	240	4.1						3.20
06	280	4.6						2.90
07	250	8.0			117	2.5	7.6	3.00
08	(230)	10.0	225	---	113	3.2	9.2	2.75
09	---	10.8	215	---	---	---	10.6	2.60
10	---	10.3	205	---	---	---	10.9	2.45
11	---	10.4	200	---	---	---	11.0	2.35
12	---	10.4	200	---	---	---	11.1	2.25
13	---	10.4	200	---	---	---	11.0	2.25
14	---	10.1	200	---	---	---	11.0	2.20
15	---	10.1	210	---	---	---	10.6	2.20
16	(230)	10.2	220	---	---	---	10.4	2.25
17	250	10.1			---	---	8.6	2.30
18	300	9.7						2.30
19	390	8.4						2.20
20	370	9.3						2.35
21	290	8.9						2.60
22	240	8.8						2.85
23	220	8.4						3.00

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 24

Thule, Greenland (77.0°N, 69.0°W) — July 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		5.0		---	119	2.2		2.80
01		5.1		---	117	2.2		(2.90)
02		5.1		(3.6)	115	(2.3)		(2.75)
03		5.1		(3.8)	109	2.5		2.80
04		5.1		3.9	109	2.6		2.90
05		5.0		4.0	109	2.8		2.80
06		5.1		4.2	109	2.9		2.70
07		5.3		4.2	107	(3.0)		2.65
08		5.4		4.5	101	3.2		2.60
09		5.4		4.4	103	3.1		2.55
10		5.4		4.4	103	3.2	3.2	G
11		5.4		4.5	101	(3.2)		2.40
12		5.2		4.6	101	3.2		2.55
13		5.4		4.5	101	(3.2)		2.40
14		5.6		4.5	101	(3.2)		2.70
15		5.5		4.4	105	3.1	3.4	2.60
16		5.6		4.4	104	(3.0)		2.75
17		5.5		4.2	105	(3.0)		2.70
18		5.7		4.1	109	2.9	3.4	(2.70)
19		5.6		4.0	112	(2.7)		(2.80)
20		5.4		3.8	113	2.5		2.75
21		5.4		---	119	(2.4)		2.80
22		5.6		3.6	119	2.3		2.80
23		5.4		---	119	2.2		2.80

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 25

Godhavn, Greenland (69.2°N, 53.5°W) July 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		(5.2)			131	1.9		(2.80)
01		(5.3)			136	(1.8)		(2.80)
02		(4.9)		---	131	(1.8)		(2.80)
03		(4.8)		---	121	2.0		(2.80)
04		(4.8)		(3.3)	115	(2.2)		(2.80)
05		(4.7)		(3.6)	109	(2.4)		----
06		(5.0)		3.8	107	2.6	2.7	----
07		(5.0)		4.1	104	2.9		----
08		(5.4)		(4.3)	101	(3.1)		
09		(5.6)		(4.5)	101	(3.2)	3.2	(2.55)
10		(5.7)		(4.6)	101	3.3		(2.70)
11		(6.0)		(4.8)	101	3.3		(2.70)
12		(6.2)		(4.8)	101	3.3		(2.60)
13		(6.1)		4.8	101	3.3	3.6	(2.65)
14		(6.1)		4.8	101	3.3	4.5	2.60
15		(5.6)		4.7	101	3.2	5.1	(2.50)
16		(5.7)		4.6	101	3.1	4.7	(2.70)
17		(5.6)		4.5	101	3.0	4.0	(2.65)
18		(5.6)		4.3	104	2.8	4.2	(2.65)
19		(5.6)		4.2	(107)	2.7	3.6	(2.80)
20		(5.5)		3.7	(111)	2.4	4.0	(2.70)
21		(5.4)		---	(113)	2.2	3.9	(2.80)
22		(5.4)		---	119	2.0		(2.75)
23		(5.2)		---	(128)	---		(2.80)

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 26

Reykjavik, Iceland (64.1°N, 21.8°W) July 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		(4.9)					3.8	(2.65)
01		(3.8)					3.9	(2.55)
02		(4.4)					4.0	(2.60)
03		(4.6)					4.4	(2.65)
04		4.6					3.5	2.70
05		4.8		---	108	---	2.4	2.85
06		5.2		3.8	111	2.7		2.80
07		5.5		4.3	109	(3.0)		2.75
08		5.7		4.7	107	3.2		2.80
09		5.9		4.8	101	3.3		2.80
10		6.0		4.9	101	3.5		2.80
11		6.2		5.0	101	3.6		2.75
12		6.0		5.0	101	3.6		2.70
13		6.2		5.0	101	3.6		2.70
14		6.3		5.0	101	3.6		2.70
15		6.3		4.9	103	(3.5)		2.70
16		6.3		4.8	103	3.4		2.80
17		6.3		4.6	107	(3.3)	3.6	2.80
18		6.2		(4.4)	108	3.1	3.6	2.80
19		5.9		---	111	3.2		2.80
20		5.5		---	---	3.1	3.9	2.85
21		5.4		---	---	---	5.3	2.85
22		5.0					4.2	2.75
23		(4.8)					4.0	(2.70)

Time: 15.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 27

Anchorage, Alaska (61.2°N, 149.9°W) July 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		4.8					2.3	2.70
01		4.4					3.7	2.60
02		4.4					3.7	2.65
03		4.5		---	---	---	2.8	2.60
04		4.9		3.3	132	1.9	2.8	2.60
05		5.4		3.8	117	2.4	3.7	2.60
06		5.7		4.1	109	2.6	3.5	2.50
07		6.0		4.4	109	3.0	3.4	2.55
08		6.2		4.5	109	3.1	3.4	2.50
09		6.2		4.6	109	3.2	3.5	2.50
10		6.1		4.7	109	3.3	3.7	2.50
11		6.1		4.8	(109)	(3.4)	3.8	2.45
12		6.0		4.9	109	(3.4)	3.8	2.50
13		5.9		4.9	109	(3.4)	3.5	2.50
14		5.9		4.8	111	3.4	3.6	2.50
15		5.8		4.8	109	3.2		2.60
16		5.8		4.6	109	(3.2)	3.0	2.70
17		5.8		4.5	109	3.0		2.70
18		5.9		(4.4)	111	2.7		2.80
19		5.9		---	117	2.4		2.85
20		5.8		---	129	(2.0)	2.6	2.90
21		5.8			---	---	2.0	2.90
22		4.9					2.0	2.80
23		4.6					2.5	2.70

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 28

Thule, Greenland (77.0°N, 69.0°W) June 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		5.2		(3.5)	119	2.2		2.75
01		5.4		(3.4)	117	2.3		(2.70)
02		5.1		(3.7)	112	2.4		2.60
03		5.0		3.8	111	2.5		2.65
04		5.0		3.9	109	(2.6)		2.60
05		4.8		4.0	109	2.8		2.60
06		5.0		4.2	107	2.9		(2.60)
07		5.0		4.3	108	3.0		2.40
08		5.2		4.4	105	(3.1)		(2.35)
09		5.1		4.4	105	(3.2)		2.40
10		5.3		4.6	103	3.2		2.50
11		5.3		4.5	103	(3.3)		(2.50)
12		5.4		4.5	101	3.3		2.40
13		5.2		4.5	105	3.2		2.55
14		5.2		4.5	105	(3.2)		(2.40)
15		5.4		4.4	104	(3.1)		2.50
16		5.2		4.2	107	(3.0)		(2.55)
17		5.4		4.2	109	(2.9)		(2.70)
18		5.2		4.1	111	2.8		2.70
19		5.2		4.0	111	2.7		(2.65)
20		5.0		(3.8)	111	2.6		2.70
21		5.2		(3.7)	114	2.5		2.70
22		5.2		(3.5)	119	2.3		2.80
23		5.0		(3.6)	119	(2.2)		2.80

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 29

Godhavn, Greenland (69.2°N, 53.5°W) June 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		(4.9)			---	---		(2.80)
01		(4.9)		---	---	1.8		(2.70)
02		(4.7)		(3.0)	119	1.8		(2.75)
03		(4.8)		(3.3)	119	1.9		(2.75)
04		(4.8)		(3.5)	111	2.2		(2.70)
05		(4.7)		(3.7)	107	2.5		(2.70)
06		(4.6)		(3.8)	103	2.7		(2.60)
07		(4.9)		(4.2)	101	2.9		----
08		(5.0)		(4.3)	101	3.1		----
09		(5.6)		(4.4)	101	3.2		(2.70)
10		(6.0)		(4.6)	101	3.3		(2.70)
11		(6.1)		(4.7)	101	3.3		(2.65)
12		(6.0)		(4.7)	101	3.3		(2.60)
13		(6.0)		(4.7)	101	3.3	4.0	(2.60)
14		(6.0)		(4.7)	101	3.3	3.8	(2.70)
15		(5.6)		4.7	101	3.2	4.7	(2.60)
16		(5.4)		4.6	101	3.1	3.9	(2.50)
17		(5.5)		4.6	101	3.0	3.0	(2.60)
18		(5.5)		4.3	103	2.8	3.9	(2.60)
19		(5.5)		4.1	105	2.5	2.8	(2.75)
20		(5.4)		(3.9)	107	2.3	3.0	(2.80)
21		(5.5)		3.6	109	2.2		(2.75)
22		(5.2)		---	112	2.1		(2.80)
23		(5.0)		---	121	2.0		(2.80)

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 30

Kiruna, Sweden (67.8°N, 20.3°E) June 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	355	5.1	---	---	---	---	5.0	(2.6)
01	350	5.4	---	---	---	---	4.0	(2.4)
02	400	5.2	260	3.1	---	---	4.0	2.4
03	395	5.2	260	3.5	105	1.8	<3.8	2.6
04	415	5.4	250	3.9	100	2.0	2.8	2.5
05	420	5.6	240	4.0	100	2.6		2.5
06	425	5.9	230	4.2	100	2.8		2.6
07	425	6.0	225	4.5	100	3.0		2.6
08	405	6.1	220	4.7	100	3.0		2.6
09	410	6.3	215	4.9	100	3.2		2.6
10	405	6.3	215	5.0	100	3.2		2.6
11	410	6.3	210	5.0	100	3.2	<3.5	2.6
12	420	6.2	210	5.0	100	3.3		2.6
13	425	6.0	210	5.0	100	3.2	<3.5	2.7
14	440	6.0	210	4.9	105	3.1	<3.3	2.65
15	435	6.0	210	4.8	100	3.0	<3.3	2.7
16	405	6.0	220	4.6	100	3.0	<3.2	2.7
17	345	6.0	230	4.5	105	2.9		2.7
18	345	6.0	240	4.2	105	2.7	<2.8	2.8
19	(340)	6.0	250	4.0	105	2.3	<3.1	2.8
20	(370)	5.8	265	3.8	110	2.1	4.0	2.7
21	340	5.5	275	---	---	---	4.0	2.65
22	340	5.2	---	---	---	---	4.2	2.7
23	345	5.2			---	---	4.0	2.6

Time: 15.0°E.
Sweep: 0.8 Mc to 14.0 Mc in 30 seconds.

Table 31

Anchorage, Alaska (61.2°N, 149.9°W) June 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		4.4					1.6	(2.65)
01		(4.5)					1.6	(2.60)
02		4.4			---	---	1.8	2.60
03		4.5		(3.0)	123	(1.6)	1.9	2.55
04		4.8		3.4	121	2.0	2.5	2.60
05		5.4		3.8	113	2.4	2.6	(2.60)
06		5.5		4.0	111	2.7	3.1	2.50
07		5.6		4.2	109	3.0	3.4	2.50
08		5.7		4.4	107	3.1		2.45
09		5.8		4.5	107	3.3		2.50
10		5.8		4.6	107	(3.3)	3.6	2.45
11		5.9		4.8	107	3.4	3.6	2.50
12		5.6		4.8	107	3.4	3.5	2.50
13		5.8		4.8	105	(3.4)		2.55
14		5.8		4.8	109	3.4		2.55
15		5.8		4.7	109	3.3		2.55
16		5.8		4.6	111	3.1		2.60
17		5.9		4.5	113	2.9		2.70
18		5.8		4.2	117	2.6	3.2	2.80
19		5.9		---	119	2.4	3.5	2.80
20		6.0		---	<131	2.0	3.1	2.85
21		5.8			---	(1.7)	3.4	2.90
22		5.6					2.2	2.85
23		4.8					2.4	2.75

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 32

Resolute Bay, Canada (74.7°N, 94.9°W) May 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		5.8		---	110	2.0		3.0
01		5.4		---	110	2.0		2.9
02		5.7		3.5	110	2.1		(2.85)
03		5.4		3.4	105	2.2		(2.9)
04		5.3		3.7	105	2.3		(2.7)
05		5.8		3.9	105	2.5		(2.6)
06		5.6		4.0	100	2.7		(2.65)
07		5.3		4.1	100	2.9		(2.8)
08		5.8		4.3	100	3.0		(2.8)
09		5.8		4.4	100	3.0		(2.6)
10		5.6		4.4	100	3.1		G
11		5.5		4.4	100	3.2		---
12		5.7		4.4	100	3.2		---
13		5.6		4.3	100	3.2		G
14		5.8		4.5	100	3.1		G
15		5.7		4.3	100	3.1		G
16		5.4		4.3	100	3.0		(2.65)
17		5.6		4.2	100	2.9		(2.7)
18		5.7		4.1	100	2.8		2.7
19		5.6		4.0	100	2.7		2.7
20		5.8		3.7	105	2.5		2.8
21		5.6		3.4	105	2.3		2.8
22		5.8		3.3	110	2.2		2.8
23		5.7		---	110	2.0		3.0

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 33

Kiruna, Sweden (67.8°N, 20.3°E) May 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	335	5.5					4.0	2.6
01	330	5.7			---	---	4.0	2.7
02	340	5.8	---	---	---	E	4.0	2.6
03	345	5.9	275	3.1	110	1.8	3.2	2.6
04	380	5.9	255	3.8	110	2.0	4.0	2.6
05	410	6.0	250	4.0	105	2.3	3.0	2.7
06	395	6.4	240	4.2	105	2.6	3.0	2.7
07	395	6.4	235	4.4	105	2.9	<3.6	2.7
08	390	6.7	225	4.6	105	3.0	3.0	2.6
09	405	7.0	220	4.8	100	3.2	<3.4	2.7
10	405	7.2	215	5.0	105	3.2	<3.6	2.7
11	395	7.2	215	5.0	105	3.2	4.0	2.7
12	400	7.0	220	5.0	105	3.3	<3.5	2.7
13	390	6.9	215	5.0	100	3.2	<4.0	2.7
14	380	7.0	220	4.8	105	3.1	3.4	2.7
15	380	6.7	220	4.6	105	3.0	3.8	2.7
16	(425)	6.2	230	4.5	105	3.0	4.0	2.8
17	(310)	6.2	240	4.3	105	2.7	3.7	2.9
18	(300)	6.2	250	---	105	2.4	4.0	2.9
19	310	6.0	250	---	105	2.0	4.0	2.9
20	300	6.0	260	---	110	1.8	4.0	2.8
21	305	5.3	---	---	---	E	4.0	2.8
22	330	5.4			---	E	4.0	2.75
23	320	6.0					4.3	(2.7)

Time: 15.0°E.
Sweep: 0.8 Mc to 14.0 Mc in 30 seconds.

Table 34

Baker Lake, Canada (64.3°N, 96.0°W) May 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		5.4			---	1.1	1.2	2.8
01		5.3			---	1.2	1.4	2.8
02		5.0			---	1.3	1.4	(2.75)
03		4.8			110	1.6	1.7	2.8
04		4.9		---	110	2.0	2.0	2.85
05		4.7		3.6	110	2.2		2.9
06		5.0		3.9	110	2.5		2.7
07		5.3		4.2	105	3.0		G
08		5.0		4.3	105	3.2		G
09		5.0		4.4	100	3.4		G
10		5.7		4.6	100	3.5		2.3
11		5.8		4.8	100	3.6		2.3
12		6.1		4.8	100	3.7		2.5
13		6.6		4.8	100	3.6		2.5
14		6.7		4.8	100	3.5		2.6
15		6.3		4.8	105	3.4		2.6
16		6.5		4.7	105	3.3		2.7
17		6.1		4.3	105	3.0		2.7
18		6.0		4.0	105	2.8		2.7
19		6.0		3.8	110	2.5		2.8
20		5.9		---	110	2.3	4.0	2.8
21		5.7		---	110	2.0	3.0	2.9
22		5.9		---	110	1.5	6.0	2.8
23		5.5			135	1.3	1.4	2.8

Time: 90.0°W.
Sweep: 1.0 Mc to 16.0 Mc in 16 seconds.

Table 35

Churchill, Canada (58.8°N, 94.2°W) May 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		5.6			---	---	7.0	(2.7)
01		4.9			---	---	6.0	---
02		4.8			---	---	5.2	---
03		4.5			120	1.9	5.0	---
04		4.7			110	2.0	5.0	---
05		5.0		3.4	110	2.8	4.3	(2.75)
06		5.0		4.0	110	2.9	4.4	2.65
07		5.6		4.4	105	3.0	5.0	2.8
08		5.7		4.7	100	3.2	5.0	2.8
09		6.0		4.8	100	3.5	5.0	2.7
10		6.0		4.9	100	3.6	4.2	2.6
11		6.4		5.0	100	3.7		2.7
12		6.8		5.0	100	3.7		2.7
13		7.0		5.0	100	3.7		2.7
14		7.0		4.9	100	3.5		2.7
15		7.2		4.9	100	3.5		2.7
16		7.0		4.8	100	3.3		2.7
17		6.8		4.5	105	3.1		2.7
18		6.8		4.2	110	3.0		2.8
19		6.5		3.9	110	2.8	3.8	2.8
20		6.0			120	2.7	4.5	2.8
21		5.8			120	2.6	6.0	(2.7)
22		5.4			---	---	6.0	2.8
23		5.7			---	---	6.3	---

Time: 90.0°W.
Sweep: 1.0 Mc to 16.0 Mc in 16 seconds.

Table 36

Lindau/Harz, Germany (51.6°N, 10.1°E) May 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	6.75					2.3	2.60
01	290	6.50					2.3	2.55
02	290	6.20					2.0	2.55
03	280	5.60			---	E	2.2	2.60
04	290	5.50	---	-----	---	E	2.7	2.65
05	270	5.80	260	-----	130	1.70	3.5	2.80
06	280	6.30	240	-----	110	2.45	4.5	2.80
07	330	6.60	230	4.30	100	2.80	4.8	2.70
08	350	6.95	225	4.80	100	3.15	4.5	2.75
09	340	7.70	215	4.95	100	3.40	5.3	2.80
10	360	7.85	215	5.20	100	3.55	6.0	2.70
11	340	8.10	215	5.25	100	3.60	6.5	2.70
12	365	8.50	215	5.25	100	3.70	6.1	2.65
13	360	8.45	220	5.30	100	3.70	6.5	2.70
14	345	8.50	215	5.30	100	3.60	6.7	2.75
15	340	8.40	230	5.20	100	3.50	5.6	2.75
16	310	8.30	225	5.00	100	3.35	4.9	2.75
17	300	8.30	230	4.60	100	3.00	4.6	2.80
18	290	8.55	250	-----	105	2.65	4.6	2.80
19	270	8.30	---	-----	115	2.05	4.3	2.80
20	260	8.60			---	E	3.5	2.85
21	250	8.10					2.9	2.75
22	255	7.50					2.3	2.70
23	275	7.05					2.3	2.60

Time: 15.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 4 minutes.

Table 37

Winnipeg, Canada (49.9°N, 97.4°W) May 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		4.6					<1.7	(2.60)
01		4.4					<1.7	----
02		4.0					<1.6	(2.60)
03		3.9					3.0	----
04		3.9					<2.0	----
05		4.3		---	---	1.9	<2.0	(2.70)
06		4.8		3.6	120	2.4		2.70
07		5.2		4.1	110	2.9		2.70
08		5.7		4.4	110	3.0		2.70
09		6.0		4.8	110	3.4		2.70
10		6.3		4.8	110	3.5		2.60
11		6.3		4.9	110	3.8		2.50
12		6.4		5.0	110	3.8		2.50
13		6.3		5.0	110	3.B		2.50
14		6.4		5.0	110	3.8		2.60
15		6.8		5.0	110	3.6		2.50
16		7.1		4.B	110	3.3		2.60
17		7.0		4.5	110	3.1		2.60
18		7.2		---	120	2.9		2.70
19		7.0			125	2.3	2.5	2.75
20		7.0			---	1.8	<2.4	2.80
21		7.0					<1.8	2.80
22		6.4					<1.6	2.75
23		5.6					2.0	2.65

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 38

Leopoldville, Belgian Congo (4.4°S, 15.2°E) May 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	215	12.B						<3.0
01	210	9.0						2.9
02	220	6.5					2.0	2.8
03	230	4.8						2.7
04	240	3.3					2.0	2.8
05	255	5.6	---	---	---	---	2.4	2.8
06	260	9.5	240	---	115	2.6	2.7	2.9
07	270	11.9	230	---	110	3.2	3.9	2.9
08	270	12.6	220	---	110	3.5	4.0	2.8
09	280	13.0	210	5.0	110	3.7		2.7
10	300	13.1	205	---	110	3.9		2.6
11	330	>13.6	210	5.1	110	4.0		2.5
12	335	>14.0	220	---	110	3.7		2.5
13	335	>14.0	220	---	110	3.7	4.0	2.4
14	350	>14.0	240	---	110	3.5	3.8	<2.5
15	320	>14.0	240	---	115	3.1	4.0	<2.5
16	300	14.0	255	---	120	2.4	4.0	<2.6
17	260	>13.9					3.4	<2.7
18	250	>13.9					3.0	(2.8)
19	240	>13.6					2.B	(2.8)
20	215	>13.5					2.2	---
21	215	>14.0					2.2	(2.8)
22	220	>14.0						(2.7)
23	215	>13.3					1.B	2.9

Time: 0.0°.
Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.

Table 39

Elisabethville, Belgian Congo (11.6°S, 27.5°E) May 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	4.0						2.7
01	255	3.5						2.7
02	255	2.8						2.7
03	250	2.8						2.B
04	260	3.9	---	---	---	---		2.6
05	240	B.5	240	---	120	2.2	2.6	3.0
06	245	10.4	230	---	110	3.0		3.0
07	255	11.6	230	---	110	3.5		2.9
08	265	12.0	220	---	110	3.6		2.8
09	280	12.0	235	---	110	3.8		2.7
10	285	12.5	240	---	110	3.8		2.6
11	300	12.8	250	---	110	3.6	4.0	2.6
12	300	12.6	245	---	110	3.6	3.9	2.6
13	305	12.0	240	---	110	3.4	3.9	2.5
14	280	11.6	240	---	110	3.1	3.6	2.5
15	255	11.8	245	---	120	2.4	3.4	2.6
16	240	11.8	---	---	---	---	3.1	2.B
17	230	11.3					3.0	2.9
18	215	10.0					2.7	2.8
19	230	8.2					2.6	2.7
20	235	B.0					2.4	2.B
21	225	6.7						2.B
22	235	5.2						2.7
23	250	4.6						2.7

Time: 0.0°.
Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.

Table 40

5ao Paulo, Brazil (23.5°S, 46.5°W) May 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	8.9					<2.5	3.2
01	240	9.0					<2.5	3.2
02	230	7.2					<2.5	3.2
03	230	6.1					<2.5	3.3
04	240	4.7						3.0
05	250	4.0						3.0
06	260	4.0						2.65
07	250	7.8			---	(2.3)	<2.5	3.2
08	250	10.6			---	2.7		3.2
09	260	12.4	240	---	120	3.1		3.1
10	260	13.4	230	---	120	3.4		3.0
11	(270)	14.0	220	---	120	(3.5)		2.9
12	270	14.0	220	---	120	(3.6)		2.B
13	(2B0)	>14.0	220	---	120	(3.6)		2.B
14	(270)	>14.0	220	---	120	3.5		2.75
15	250	>14.0	240	---	130	3.2		2.9
16	250	>14.0	---	---	120	2.7		3.0
17	250	>14.0			---	(2.2)	2.8	(2.8)
18	230	14.0					<2.B	3.1
19	230	12.4					3.1	3.0
20	240	12.6					<2.5	2.9
21	240	11.6					<2.5	3.0
22	230	11.0					<2.5	3.1
23	230	9.3					<2.5	3.1

Time: Local.
Sweep: 1.75 Mc to 20.0 Mc in 7 minutes 1B seconds.

Table 41*

Inverness, Scotland (57.4°N, 4.2°W) April 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	335	5.1						2.4
01	340	4.7						(2.4)
02	330	4.3					1.2	(2.4)
03	340	4.0					2.3	(2.4)
04	330	3.7						(2.4)
05	300	4.4			130	1.5		2.6
06	265	5.3			125	2.0		2.B
07	290	5.9	245	(4.2)	115	2.5		2.B
08	345	6.6	235	(4.5)	110	2.9		2.7
09	335	7.0	230	4.8	110	3.1		2.7
10	360	7.3	225	5.0	110	3.3		2.7
11	355	7.5	220	5.2	105	3.4		2.7
12	370	7.4	225	5.3	105	3.5		2.6
13	375	7.6	225	5.2	110	3.5		2.6
14	350	7.B	235	5.2	105	3.4		2.7
15	345	7.B	235	5.1	110	3.3		2.7
16	315	7.8	245	4.9	110	3.1		2.7
17	280	8.2	250	(4.2)	110	2.B		2.B
18	265	B.0	255	---	120	2.3		2.8
19	260	7.9			140	1.9		2.B
20	265	7.3			---	---		2.7
21	270	6.B						2.6
22	295	5.9						2.5
23	315	5.5						2.4

Time: 0.0°.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 42*

5lough, England (51.5°N, 0.6°W) April 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	330	6.0						2.4
01	325	5.B					2.6	2.4
02	320	5.4					2.5	2.4
03	320	4.B					2.6	2.4
04	320	4.4					3.0	2.45
05	315	4.7	(290)	(3.4)	135	1.7	3.2	2.6
06	300	6.0	275	3.7	135	2.2	3.4	2.75
07	320	6.7	250	4.2	120	2.7	4.2	2.75
08	345	7.3	245	4.6	120	3.1	4.0	2.7
09	345	7.7	240	4.9	115	3.4	4.2	2.6
10	360	B.1	235	5.3	115	3.5	4.1	2.6
11	345	8.7	230	5.5	115	3.6	4.4	2.6
12	345	B.7	235	5.5	115	3.7	4.2	2.6
13	340	9.0	230	5.5	115	3.6	4.3	2.6
14	320	9.2	230	5.1	115	3.6	3.8	2.65
15	305	9.0	240	5.0	115	3.4	3.6	2.65
16	305	9.1	245	4.6	120	3.1	3.B	2.65
17	2B0	9.0	250	4.1	120	2.B	3.4	2.75
18	265	9.0	(265)	(3.8)	125	2.2	3.3	2.75
19	260	8.B			(140)	(1.7)	2.6	2.75
20	260	B.1					2.1	2.65
21	275	7.4					2.0	2.55
22	305	6.9						2.45
23	320	6.4					2.2	2.4

Time: 0.0°.
Sweep: 0.55 Mc to 16.5 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 43*

Singapore, British Malaya (1.3°N, 103.8°E) April 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	235	(13.1)					2.2	3.0
01	230	10.6						3.0
02	235	9.1						3.0
03	230	8.6						3.0
04	230	7.2						3.1
05	230	5.5					2.1	3.1
06	270	6.0				1.6	2.6	2.8
07	250	10.0			125	2.6	3.4	2.9
08		12.7	245		115	3.2	3.9	2.7
09		13.6	230		110	3.6	4.5	2.5
10		13.8	215		110	3.8	4.5	2.3
11		13.5	210		110	4.0	4.7	2.1
12		13.2	205		110	4.0	4.6	2.2
13		13.2	210		110	4.0	4.2	2.2
14		13.4	220		110	3.9		2.2
15	(240)	13.9	215		110	3.7	4.2	2.2
16	245	14.2	235		110	3.3	3.9	2.2
17	255	14.4			115	2.7	3.8	2.2
18	285	14.5					2.6	---
19	340	>14.2					3.0	---
20	330	>13.9						---
21	260	13.9					2.6	---
22	230	(14.0)					2.9	---
23	230	13.2					2.9	(2.8)

Time: 105.0°E.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 44*

Falkland Is. (51.7°S, 57.8°W) March 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	315	6.6					2.8	2.4
01	325	6.4					2.6	2.4
02	315	6.4					2.6	2.4
03	310	6.4					2.6	2.4
04	310	6.0					2.0	2.5
05	320	5.6						2.5
06	285	6.7			155	1.6	2.0	2.7
07	245	8.4	(255)		125	2.3	3.2	3.1
08	295	9.3	245	(4.2)	115	2.8	4.0	3.1
09	305	10.6	240		110	3.1	5.0	2.9
10	325	10.8	230	(4.8)	105	3.3	5.2	2.9
11	280	11.5	230	(4.8)	105	3.4	5.2	2.9
12	260	12.3	220		105	3.4	5.6	2.9
13	260	12.4	230		105	3.4	5.2	3.0
14	255	12.5	230		105	3.3	5.2	3.0
15	245	11.4	235		110	3.1	5.2	3.0
16	245	10.6	(245)		110	2.8	4.8	3.1
17	245	9.2			120	2.3	4.4	3.1
18	240	8.9			(135)	(1.9)	3.7	3.1
19	240	8.4					4.0	3.1
20	260	7.2					3.1	2.8
21	270	6.7					3.1	2.6
22	300	6.7					2.5	2.5
23	310	6.5					2.4	2.4

Time: 60.0°W.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes.
*Average values except foF2 and fEs, which are median values.

Table 45

Poitiers, France (46.6°N, 0.3°E) October 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	<285	4.0						2.90
01	285	3.9						2.85
02	280	4.0						2.85
03	280	3.8						2.90
04	255	3.9						3.10
05	<230	3.3						3.25
06	240	3.7			---	E		3.20
07	225	5.5	220	2.2	---	1.9	2.1	3.50
08	230	6.5	220	3.6	110	2.5	2.7	(3.35)
09	245	7.2	215	4.0	105	2.8	3.1	(3.30)
10	250	7.7	210	4.3	105	2.9	3.4	(3.30)
11	250	(8.0)	210	4.4	100	2.9	3.6	----
12	250	8.5	210	4.5	100	3.0	3.3	----
13	250	8.4	215	4.4	105	3.0	3.2	----
14	250	8.6	230	4.1	105	2.9		----
15	250	(9.0)	235	3.9	110	2.6		----
16	240	(8.5)	245	3.1	110	2.2	2.5	
17	230	(7.0)	---	(2.2)	---	E	2.9	----
18	220	6.0			---	E	2.6	----
19	225	5.7			---	---	2.4	(3.30)
20	230	4.8					2.4	3.20
21	250	4.4					2.2	3.05
22	<260	4.0					2.0	2.90
23	270	4.0						2.85

Time: 0.0°.
Sweep: 1.6 Mc to 16.8 Mc in 1 minute.

Table 46

Casablanca, Morocco (33.6°N, 7.6°W) October 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	4.40					2.1	3.00
01	---	4.30						2.90
02	---	4.10						3.00
03	---	4.05						3.05
04	---	4.10						3.20
05	---	3.40						3.20
06	---	3.20						3.10
07	225	5.80	240	----	---	E		3.50
08	235	7.30	225	3.30	105	2.40	3.0	3.55
09	240	8.20	220	4.30	105	2.70	3.5	3.50
10	250	8.25	220	4.75	100	3.05	3.8	3.40
11	250	8.80	200	4.70	105	3.20	3.6	3.40
12	260	9.05	205	4.70	100	3.25	3.6	3.30
13	270	9.20	215	4.90	105	3.25	3.6	3.20
14	275	9.20	240	(5.00)	105	3.20	3.6	3.20
15	265	9.70	240	(4.50)	105	3.00	3.3	3.25
16	255	10.20	235	(4.30)	110	2.60	3.6	3.30
17	245	10.30	240	(4.00)	120	2.00	3.5	3.40
18	220	9.00					3.2	3.50
19	<215	6.70					3.0	3.40
20	---	5.00					2.6	3.05
21	---	4.80					2.2	3.00
22	---	4.60					2.4	3.00
23	---	4.50					2.1	2.90

Time: 0.0°.
Sweep: 1.6 Mc to 16.0 Mc in 1 minute 15 seconds.

Table 47

Poitiers, France (46.6°N, 0.3°E) May 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	4.5					2.2	----
01	260	4.2					1.9	(2.95)
02	275	3.9					2.0	(2.95)
03	265	3.7					2.0	(3.00)
04	255	3.4			---	E	1.9	3.05
05	250	3.9	240	2.7	---	E	2.0	3.20
06	270	4.5	225	3.5	110	2.2	2.8	3.25
07	300	5.0	225	4.0	100	2.6	3.3	(3.30)
08	300	5.4	210	4.2	100	2.8	3.6	3.35
09	320	5.6	205	4.3	100	3.0	3.6	3.30
10	310	5.7	210	4.4	100	3.2	4.8	(3.25)
11	315	5.7	210	4.5	100	3.3	4.4	3.30
12	350	5.7	195	4.5	100	3.2	3.8	3.10
13	350	5.6	210	4.5	100	3.2	3.9	3.05
14	330	5.8	210	4.4	100	3.2	4.4	(3.20)
15	325	5.8	210	4.3	100	3.0	4.2	3.10
16	310	5.9	220	4.2	100	2.8	3.6	(3.10)
17	300	6.0	230	3.9	105	2.5	4.3	(3.10)
18	265	5.9	230	3.3	110	2.1	4.0	----
19	255	(5.8)	260	2.7	---	E	3.2	
20	240	(6.3)					2.7	
21	240	5.4					3.4	
22	245	4.9					2.6	----
23	250	4.6					2.4	----

Time: 0.0°.
Sweep: 1.6 Mc to 16.8 Mc in 1 minute.

Table 48

Casablanca, Morocco (33.6°N, 7.6°W) May 1955

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---	4.30					3.4	3.00
01	---	4.30					3.1	3.00
02	---	4.30					3.1	3.10
03	---	3.95					2.7	(3.10)
04	---	4.00					2.5	3.10
05	---	3.65					2.5	3.20
06	235	4.50	240	----	---	----	2.8	3.40
07	250	5.40	235	3.60	110	2.20	3.5	3.55
08	250	5.90	225	4.00	105	2.70	4.0	3.60
09	285	5.80	205	4.30	105	3.00	4.5	3.40
10	(300)	5.90	210	4.40	105	3.10	4.3	3.30
11	320	6.00	205	4.40	105	3.20	4.1	3.20
12	340	6.20	---	----	105	3.20	3.5	3.10
13	330	6.70	---	----	105	3.20	3.2	3.00
14	335	7.00	---	(4.50)	110	3.20	4.0	3.00
15	330	7.45	220	4.40	110	3.10	4.5	3.00
16	305	8.00	---	4.30	110	3.00	5.1	3.10
17	295	8.10	225	4.00	110	2.70	5.0	3.15
18	280	8.55	240	3.60	115	2.20	4.4	3.20
19	250	8.65	245	2.90	---	----	4.2	3.30
20	235	7.80					3.6	(3.30)
21	---	6.70					3.9	3.25
22	---	4.70					3.5	3.15
23	---	5.00					3.5	3.00

Time: 0.0°.
Sweep: 1.6 Mc to 16.0 Mc in 1 minute 15 seconds.

Table 49

Tananarive, Madagascar (18.8°S, 47.8°E) October 1954

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	<250	4.2					1.8	3.07
01	220	3.8					1.8	3.34
02	<220	3.0					2.0	3.03
03	<260	2.7					3.2	2.88
04	<260	2.7					2.4	3.00
05	<260	2.6					2.0	2.98
06	240	4.5			<131	1.80	1.9	3.33
07	270	5.5	230	3.90	109	2.40		3.23
08	295	6.6	220	4.15	107	2.85	3.0	3.13
09	290	7.7	215	4.40	105	3.15		3.17
10	295	7.9	215	4.50	105	3.30		3.05
11	315	8.0	210	4.55	106	3.40		2.94
12	300	8.6	210	4.55	105	3.40		2.98
13	290	8.5	200	4.45	107	3.35		3.06
14	290	7.8	220	4.40	106	3.25		3.04
15	290	7.3	220	4.25	105	3.05		3.00
16	280	7.6	230	4.00	105	2.70		3.05
17	260	7.3	240	----	115	2.20	2.8	3.14
18	240	7.8			---	1.40	2.4	3.22
19	225	6.5					2.3	3.17
20	230	5.4					1.9	3.06
21	<250	4.6					1.7	3.00
22	250	4.2					1.5	2.97
23	260	4.1					1.6	2.93

Time: Local.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.

Table 50

Djibouti, French Somaliland (11.5°N, 43.1°E) October 1953

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	6.0					2.7	(2.92)
01	245	6.2						(3.23)
02	230	>5.7						3.22
03	230	4.1					2.6	3.39
04	240	3.6					2.2	3.43
05	250	2.8					2.0	3.33
06	240	6.2			125	2.10	3.8	3.40
07	270	7.6	230	----	113	2.70	3.8	3.20
08	305	8.4	220	4.50	---	3.00	4.0	2.96
09	320	8.8	210	4.60	---	3.25	6.2	2.74
10	330	8.8	205	4.60	---	3.40	6.7	2.68
11	340	8.8	205	4.75	---	3.45	6.4	2.68
12	335	9.4	215	4.70	---	----	6.8	2.78
13	320	>10.0	210	4.55	---	3.30	4.8	2.90
14	305	11.0	215	4.40	---	----	6.6	2.92
15	300	11.2	220	----	---	2.90	4.3	2.98
16	280	10.8	240	----	---	----	4.1	<2.92
17	245	(9.8)			---	1.70	4.0	(2.79)
18	260	9.2					3.3	(2.82)
19	260	8.8					2.6	(2.76)
20	260	>8.4					2.9	<3.00
21	260	7.8					3.1	(3.05)
22	270	(6.5)					3.3	(2.94)
23	270	>6.0					3.6	(2.95)

Time: 35.6°E.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.

Table 51

Leopoldville, Belgian Congo (4.4°S, 15.2°E) April 1952

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M2000)F2
00	230	5.7						2.4
01	230	4.1						2.4
02	260	3.2					1.9	2.4
03	240	2.8					2.0	2.5
04	235	2.6					3.0	2.8
05	240	4.0			---	---	2.9	2.6
06	235	6.6	230	---	120	2.3	3.4	2.8
07	260	7.6	220	---	110	2.8	3.8	2.5
08	290	8.6	215	---	110	3.2	4.0	2.4
09	290	9.6	210	4.6	110	3.4	4.1	2.3
10	330	9.8	200	4.6	110	3.5	3.5	2.1
11	330	11.0	210	4.7	110	3.6		2.2
12	310	12.7	220	4.6	110	3.5		2.2
13	300	12.8	220	4.4	110	3.4	3.6	2.2
14	290	12.8	225	---	110	3.2	4.0	2.2
15	295	12.7	230	---	110	2.7	3.7	2.2
16	270	12.7	240	---	120	2.2	3.7	2.3
17	240	>13.1					3.4	2.4
18	230	12.8					3.1	<2.5
19	215	12.0					2.5	2.6
20	210	9.8						2.6
21	215	9.0						2.4
22	230	7.0						2.4
23	230	6.8						2.4

Time: 0.0°.
Sweep: 1.0 Mc to 16.0 Mc in 7 seconds.

TABLE 52

IONOSPHERIC DATA

foF2, 0.1 Mc, Nov. 1956 — 75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1° W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01	70	66	62	64	59	53	52	76	115	122	131	130	127	128	126	126	117	111	105	94	J 76	H 76	73	73
02	64	60	52	52	49	47	50	74	111	122	140	138	140	136	132	132	130	125	108	92	85	85	78	72
03	66	63	60	62	63	56	57	86	115	136	142	142	140	136	134	133	130	120	107	94	80	78	72	69
04	70	68	58	54	F 52	51	55	89	109	134	136	134	136	134	131	128	125	119	105	92	85	U S 74	71	66
05	63	63	58	58	54	48	48	78	110	120	133	133	132	132	125	127	120	110	104	90	88	80	72	66
06	62	59	63	62	58	50	48	80	112	136	135	136	135	128	134	132	125	123	108	92	88	87	77	72
07	66	67	67	68	61	55	50	84	116	129	137	135	132	130	128	128	120	117	109	96	86	84	74	68
08	63	60	57	58	59	53	48	80	112	128	140	H 137	H 138	H 136	H 130	128	125	118	112	102	90	77	76	72
09	72	72	68	66	61	52	50	80	117	134	H 141	U S 138	135	131	130	130	U S 131	117	105	98	88	U S 92	84	U S 73
10	74	82	U S 79	74	U F 68	F 64	62	68	86	106	113	J 118	125	127	114	124	U S 128	U S 120	U P 100	U S 82	68	U F 56	U F 42	U F 43
11	U F 58	U F 38	F 36	F 34	F 36	F 36	U F 42	F 70	99	113	126	129	140	140	136	135	133	123	102	F 86	F 72	F 74	78	F 68
12	F 64	U F 58	F 57	F 55	F 48	F 45	F 49	82	105	114	123	133	140	144	142	142	F 134	133	115	U F 100	F 88	86	U F 54	U F 56
13	U F 58	U F 47	U F 32	U F 33	U F 43	U F 40	F 47	F 70	113	133	135	135	137	136	136	135	128	119	108	98	86	71	F 62	F 62
14	F 56	U F 38	U F 51	U F 53	U F 56	U F 55	U F 52	F 59	F 82	96	114	124	128	129	126	123	117	115	95	U F 65	F 63	U F 55	U F 47	U F 45
15	U F 41	U F 45	U F 50	U F 44	U F 40	U F 30	U F 32	F 37	42	49	52	67	F 76	78	F 86	F 91	F 96	92	80	U F 67	U F 62	U F 54	F 41	U F 38
16	U F 34	U F 31	U F 34	U F 38	U F 40	U F 48	U F 43	F 67	96	108	120	125	128	128	126	127	125	124	U S 110	89	76	70	62	56
17	50	48	47	F 43	F 39	39	42	72	103	105	126	126	132	134	135	135	135	127	U S 113	96	82	78	76	73
18	70	F 60	60	F 58	F 56	64	F 62	F 75	112	128	137	144	U P 152	141	135	130	H 125	117	105	96	85	72	F 66	64
19	56	50	F 44	F 40	F 40	F 37	38	68	103	120	130	140	144	140	138	135	128	120	106	92	85	72	69	64
20	F 61	F 60	F 56	U F 52	U F 44	F 43	F 43	F 66	100	130	138	138	143	141	135	135	130	125	110	95	90	84	U F 76	83
21	76	F 68	70	65	F 57	U F 50	U F 50	F 60	90	102	111	132	135	137	135	134	135	128	113	92	86	75	70	67
22	62	U F 47	F 43	F 44	U F 42	F 42	F 43	F 68	98	109	H 127	136	138	140	137	136	130	130	115	105	94	F 84	90	95
23	83	75	74	70	F 63	U F 54	F 50	F 61	F 99	117	125	138	140	140	138	136	132	123	114	98	F 85	74	F 66	U F 58
24	U F 55	U F 52	U F 47	U F 48	U F 46	U F 44	U F 43	U F 63	C	C	C	C	C	C	C	C	C	C	U F 105	99	92	U F 78	U F 76	U F 70
25	U F 59	U F 55	U F 53	F 51	F 47	F 48	F 48	70	102	110	114	129	135	140	132	132	130	123	107	102	90	84	F 72	F 66
26	U F 68	U F 61	U F 66	F 57	F 48	F 48	F 49	U F 67	106	130	138	140	U F 140	134	131	133	129	120	110	96	86	73	F 57	U F 59
27	U F 55	U F 46	U F 54	U F 52	F 54	F 50	U F 47	F 70	U S 113	122	133	U S 137	139	132	U S 132	127	117	112	U S 108	83	70	U S 68	71	U S 76
28	69	F 64	63	58	60	60	58	U S 71	103	123	126	137	140	139	136	136	135	125	109	94	88	U S 82	77	68
29	F 65	63	62	61	60	56	49	66	100	110	130	136	136	130	121	121	120	119	105	88	78	78	72	63
30	59	58	62	61	56	49	47	63	105	126	130	132	131	131	127	125	123	116	107	104	88	F 74	F 72	68
MED	63	60	58	56	54	50	48	70	105	122	130	135	136	134	132	132	128	120	108	94	86	76	72	68
NO	30	30	30	30	30	30	30	30	29	29	29	29	29	29	29	29	29	29	30	30	30	30	30	30

CENTRAL RADIO PROPAGATION LABORATORY, NATIONAL BUREAU OF STANDARDS, BOULDER, COLO.

TABLE 53
IONOSPHERIC DATA

foF2, 0.1 Mc, Nov. 1956 — 75° W Meon Time

Stotion: Woshington, D.C. Lot. 38.7°N Long. 77.1° W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Manual ☐ Automotic ☒

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
01	67	64	63	62	56	F 50	63	94	114	124	125	131	I C 128	126	126	123	114	107	97	74	76	76	72	69
02	61	58	51	50	47	48	60	91	120	139	140	140	136	136	133	131	125	120	105	92	83	83	76	68
03	68	62	64	63	60	56	68	104	127	142	145	142	139	137	133	135	125	115	105	85	79	74	70	69
04	69	65	58	52	52	50	F 67	96	123	130	136	134	135	131	128	123	120	113	96	88	80	72	68	67
05	63	60	58	57	51	48	59	94	120	131	132	135	133	130	125	125	120	110	98	90	82	78	70	66
06	60	60	63	61	55	48	60	96	I C 124	135	138	135	134	130	135	129	120	119	102	88	86	86	76	67
07	64	68	69	66	58	49	62	104	124	123	136	134	133	130	128	126	117	113	104	93	86	80	69	67
08	60	59	56	58	58	49	58	96	119	135	138	H 138	H 137	H 132	H 130	122	123	115	110	98	85	74	71	72
09	72	68	68	64	56	52	63	98	U S 122	U S 136	I C 142	U S 135	132	131	130	U S 129	128	110	92	90	92	J 93	84	U S 70
10	U S 76	U S 80	78	72	F 68	U S 59	62	F 80	99	112	112	123	127	116	120	128	125	107	J 93	74	F 70	U J 54	U F 39	U F 44
11	F 39	U F 37	U F 36	F 37	F 37	U F 38	U F 50	85	105	123	126	140	141	140	136	133	130	120	96	84	69	75	U S 64	62
12	F 64	F 57	F 58	F 52	F 45	F 47	F 58	102	111	112	129	136	143	145	143	136	U F 130	127	106	92	86	78	U F 49	U F 57
13	U F 50	U F 45	U F 33	U J 44	U F 41	U F 33	F 50	92	124	136	137	135	138	136	134	132	127	113	104	94	80	67	60	58
14	F 45	U F 36	U J 51	U F 45	U F 53	F 52	U J 57	75	90	105	118	128	123	126	125	125	115	101	U J 64	J 63	U F 46	U J 55	U F 45	F 42
15	U J 45	U F 52	U F 47	U F 44	U F 32	U F 32	F 32	46	48	53	F 60	F 70	F 76	F 82	F 90	F 95	92	85	U S 70	U S 64	56	U F 50	F 39	37
16	F 35	U F 34	F 35	F 42	U F 44	U F 46	U F 50	84	98	115	125	126	129	126	129	125	122	120	98	80	71	68	60	52
17	50	47	44	43	39	S 43	52	87	110	120	128	129	134	135	135	135	130	114	103	92	84	76	70	72
18	U F 67	Z 62	F 60	F 58	58	F 64	F 68	92	115	132	J 142	145	140	140	131	130	121	112	104	90	81	68	64	F 60
19	F 50	F 47	F 42	F 40	F 39	F 37	48	86	115	129	135	146	141	F 140	135	132	125	108	100	86	74	69	67	64
20	F 57	F 57	U F 56	U F 50	F 43	F 42	U F 52	90	123	130	125	125	141	135	140	135	130	119	105	89	82	75	82	77
21	69	71	F 66	F 64	F 41	U F 50	U F 51	F 72	93	101	127	133	140	137	133	134	132	121	109	90	78	70	70	64
22	U F 52	F 44	F 44	F 41	F 41	F 43	F 49	87	108	126	131	142	137	140	136	135	132	123	113	98	85	84	U F 78	92
23	84	76	72	F 68	F 63	F 54	F 48	H 88	107	115	129	141	143	140	140	134	130	127	107	95	77	F 73	F 66	F 60
24	U F 57	F 47	F 46	F 49	F 47	F 43	U F 47	F 86	C	C	C	C	C	C	C	C	C	118	102	94	F 78	73	F 76	F 65
25	F 63	F 54	U F 51	F 49	F 49	F 48	54	87	103	108	120	135	140	135	134	130	128	116	99	96	87	76	F 66	F 68
26	F 66	U F 63	U F 60	F 50	47	F 47	F 54	F 84	I C 123	139	135	146	137	136	133	130	128	110	102	90	80	F 68	F 58	U F 52
27	49	U F 52	U F 56	F 52	51	F 48	F 53	92	I C 112	130	U S 137	U S 139	135	I C 135	U S 132	I C 125	117	U S 109	U S 98	82	U S 70	F 68	I C 72	70
28	F 68	63	62	61	58	57	U F 61	90	116	125	128	137	140	140	136	136	130	116	103	90	84	76	70	65
29	63	68	60	62	58	52	52	86	106	125	132	132	135	135	120	123	119	113	93	88	78	78	69	61
30	60	62	61	58	51	47	49	81	116	121	135	130	129	128	126	128	118	117	106	94	80	F 74	72	68
MED	62	60	58	52	51	48	54	89	115	125	132	135	136	135	133	130	125	114	102	90	80	74	70	66
NO	30	30	30	30	30	30	30	30	29	29	29	29	29	29	29	29	29	30	30	30	30	30	30	30

CENTRAL RADIO PROPAGATION LABORATORY, NATIONAL BUREAU OF STANDARDS, BOULDER, COLO.

TABLE 54

IONOSPHERIC DATA

foF1, 0.1 Mc, Nov. 1956 — 75° W Mean Time

Station Washington, D.C. Lat. 38.7°N Lang. 77.1° W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01								Q	L	L	L	L	L	L	L	L	Q	Q						
02								Q	L	L	L	L	L	L	L	L	L	Q						
03								L	L	L	L	L	L	L	L	L	L	L						
04								L	L	L	L	L	L	L	L	L	L	L						
05								L	L	L	L	L	L	L	630	L	L	L						
06								L	L	L	L	L	L	L	L	L	L	L						
07								Q	L	L	L	L	L	L	L	L	L	Q						
08								Q	L	L	L	L	L	L	L	L	L	Q						
09								Q	Q	L	L	L	L	L	Q	Q	Q	Q						
10								Q	Q	Q	Q	Q	Q	L	L	Q	Q	Q						
11								Q	Q	Q	L	L	L	L	L	L	L	Q						
12								Q	L	L	L	L	L	L	L	L	L	Q						
13								Q	A	A	L	L	L	L	L	L	L	Q						
14								Q	L	L	L	L	L	L	L	L	Q							
15								Q	L	L	L	L	L	L	L	Q	Q	Q						
16								Q	Q	L	L	L	L	L	L	L	L	L						
17								Q	L	L	L	L	L	L	L	L	L	Q						
18								Q	Q	L	L	L	L	L	L	L	L	Q						
19								Q	L	L	L	L	L	L	L	L	L	Q						
20								L	L	L	L	L	L	L	L	L	L	Q						
21								Q	Q	L	L	L	L	L	L	L	Q	Q						
22								Q	L	B	L	L	L	L	L	L	L	Q						
23								Q	Q	L	L	L	L	L	L	L	L	L						
24								Q	C	C	C	C	C	C	C	C	C	C						
25								Q	L	L	L	L	L	L	L	L	L	L						
26								Q	L	L	L	L	L	L	L	L	L	Q						
27								Q	Q	L	Q	Q	L	L	L	Q	Q	Q						
28								Q	Q	L	L	L	L	L	L	L	L	L						
29								Q	Q	L	L	L	L	L	L	L	Q							
30								Q	Q	Q	L	L	L	L	L	L	L	L						
MED																								
NO															1									

TABLE 55

IONOSPHERIC DATA

foE, 0.1 Mc, Nov. 1956 — 75° W Mean Time

Stotion: Washington, D.C. Lat. 38.7°N Long. 77.1° W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01								B 190	B 250	 320	 340	 360	 350	 360	 330	 310	 240	B S						
02								B 190	R 250	U A 310	 350	I A 360	H 360	H 360	 350	 310	 250	S S						
03								U R 190	A 250	A 310	H 330	H 340	 360	 350	 350	 320	A 240	S S						
04								B 190	A 250	 310	I R 340	 360	 370	 360	H 350	 310	F 260	A S						
05								B 190	U R 260	 310	A 320	A 340	 370	 370	 350	 330	A 240	A S						
06								B 190	H 270	 320	H 350	 370	 360	 370	 350	 310	A 240	A S						
07								B 190	U A 250	H 330	I A 360	U A 380	I A 380	 370	 350	U P 320	 250	A S						
08								B 190	B 250	U R 310	A 320	A 340	U A 360	 370	 360	A S	A 240	B S						
09								B 190	 260	 310	U A 340	 350	 370	 370	 340	A S	A 240	A S						
10								B 190	U H 250	H 290	H 320	U R 340	 350	 340	H 340	U A 310	U A 250	S S						
11								U R 190	R 250	B 290	R 320	U P 350	H 360	H 360	 350	F 310	 240	S S						
12								S S	R 250	H 310	H 340	 360	H 360	 360	H 350	 320	 250	S S						
13								A S	A 250	A 310	A 320	 370	U A 360	F 350	 330	 300	H 240	S S						
14								U P 190	H 260	 290	 320	H 350	 340	 350	 340	 280	 210	 S						
15								A S	B 250	H 300	 330	 340	 330	 330	 310	 290	H 240	S S						
16								H 200	H 260	H 310	H 340	H 350	H 350	 350	 330	 290	 230	S S						
17								U A 190	H 250	H 300	 330	 350	 350	 340	H 320	 280	 240	S S						
18								S S	B 250	 290	H 330	H 350	I A 340	 340	I A 320	H 290	H 250	S S						
19								B 190	H 260	 310	 330	 350	 350	 330	F 320	 290	 240	S S						
20								A S	 270	 310	 330	 350	 350	H 350	 330	 290	H 240	S S						
21								B 190	 240	H 280	H 320	H 350	H 350	H 340	 320	 290	 230	S S						
22								S S	 240	I B 300	H 350	 350	 360	I A 340	H 320	U A 280	H 240	S S						
23								S S	A 250	F 290	U F 320	I A 330	 340	U A 330	 320	 290	U A 210	S S						
24								S S	C C	C C	C C	C C	C C	C C	C C	C C	C C	C C						
25								S S	 250	 290	 320	 330	 340	 330	 320	 290	A 240	S S						
26								A S	H 250	H 300	 340	A 350	A 350	 330	A 330	A 290	A 240	S S						
27								S S	 240	 290	F 310	 340	I A 350	U R 350	U H 320	 270	U F 220	S S						
28								S S	 240	 290	 330	A 340	 360	 350	 340	 290	A 240	S S						
29								S S	H 250	 300	U A 330	 340	 350	 340	 320	 290	A 240	 S						
30								B 190	 250	 310	 340	H 350	 340	H 340	H 320	A 240	A 240	A S						
MED								U 190	250	300	330	350	350	350	330	290	240							
NO								5	18	26	25	25	28	29	28	25	19							

CENTRAL RADIO PROPAGATION LABORATORY, NATIONAL BUREAU OF STANDARDS, BOULDER, COLO.

TABLE 56

IONOSPHERIC DATA

fEs, 0.1 Mc, Nov. 1956 75° W Mean Time

Station: Woshington, D.C. Lat. 38.7°N Long. 77.1° W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Monual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01	B	B	B	B	B	B	31	26	B	G	G	G	Y 98	37	42	34	27	B	S	B	B	B	B	B
02	B	B	B	B	B	B	B	B	G	40	G	36	51	G	G	G	G	19	S	B	S	S	B	B
03	S	S	B	S	S	S	S	G	26	30	30	G	30	G	G	G	68	S	S	S	S	33	S	B
04	S	S	S	S	S	B	S	B	30	G	G	G	G	G	G	25	22	20	B	39	43	S	S	B
05	B	B	S	B	B	S	S	B	G	G	H 43	H 34	32	33	G	26	S	H 38	25	B	B	S	B	B
06	S	B	S	B	B	S	B	B	G	G	G	29	28	27	32	40	44	38	30	B	B	B	S	B
07	19	17	S	B	B	S	B	B	28	H 33	H 43	37	48	35	G	G	G	25	39	B	26	B	B	B
08	B	B	B	B	B	S	S	B	B	G	32	34	37	G	G	33	28	B	23	31	B	B	B	B
09	B	S	S	B	B	S	S	B	G	28	Y 37	G	31	Y 36	Y 21	Y 39	48	Y 20	S	S	S	S	S	S
10	S	S	S	S	S	S	S	B	G	G	Y 37	28	G	G	G	Y 38	Y 33	S	S	S	S	S	S	S
11	S	S	S	S	S	S	S	G	G	B	G	G	G	G	G	70	S	S	S	S	S	S	S	S
12	35	S	S	S	S	E	S	G	G	45	45	38	G	35	36	G	G	S	S	S	S	S	S	S
13	38	S	S	44	35	S	74	58	66	115	H 70	40	45	G	G	G	30	Y 34	18	S	68	75	36	S
14	S	S	30	S	S	S	S	G	G	G	G	G	G	G	G	F 31	23	S	S	S	S	S	S	S
15	S	S	S	30	B	B	S	21	B	G	G	G	Y 35	G	G	32	G	17	S	E	S	Y 50	S	S
16	S	S	31	E	S	E	44	G	47	29	G	G	35	25	19	18	G	20	S	S	S	S	S	S
17	S	S	S	S	S	H 38	S	48	G	26	22	G	G	G	G	G	G	32	S	S	S	S	S	24
18	S	S	S	35	S	S	S	20	30	33	33	25	H 72	35	32	27	G	G	S	S	S	S	S	45
19	S	S	S	E	E	S	S	B	G	18	G	G	38	45	39	41	47	S	S	S	S	S	S	S
20	30	40	42	29	27	33	31	31	33	32	G	18	74	94	G	G	Y 38	G	B	S	S	S	S	S
21	S	S	S	S	E	S	S	B	G	G	G	G	34	36	G	G	24	S	S	S	S	S	S	S
22	S	S	S	S	S	S	S	S	G	B	G	G	G	34	36	49	47	G	S	S	S	E	S	S
23	S	E	S	S	S	E	S	18	39	37	G	H 68	50	34	36	36	36	G	S	S	S	S	S	S
24	S	S	45	S	E	S	S	110	C	C	C	C	C	C	C	C	C	C	S	S	S	S	S	S
25	S	S	54	S	S	37	Y 68	30	36	36	35	G	G	78	49	39	32	B	66	S	S	S	S	S
26	S	S	E	E	E	70	H 70	H 78	32	G	G	76	35	54	34	31	H 28	G	S	S	S	E	S	18
27	S	S	28	S	S	S	S	G	Y 47	G	G	G	35	G	G	G	G	G	S	S	S	C	S	C
28	S	S	S	S	S	S	S	G	G	31	34	35	25	G	G	30	21	G	B	S	S	S	S	S
29	B	S	S	B	29	Y 29	S	G	G	G	G	G	35	33	G	G	23	B	S	S	S	S	S	S
30	S	S	E	E	S	S	B	B	G	G	35	37	40	56	48	35	25	28	58	39	39	41	35	42
MED							31						35			30	25		24					
NO	10	8	12	16	15	12	10	29	29	29	29	29	29	29	29	29	27	22	10	9	8	10	7	12

TABLE 57
IONOSPHERIC DATA

f min. 0.1 Mc, Nov. 1956 — 75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1° W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01	20	20	23	22	21	19	19	24	31	17	19	19	20	26	19	18	17	24	E S 16	18	24	23	23	21
02	21	19	20	20	22	20	23	26	24	26	24	21	22	21	20	21	E S 16	E S 16	E S 16	20	E S 16	E S 16	18	19
03	E S 16	E S 16	20	E S 16	E S 16	E S 16	E S 16	E S 16	20	20	20	21	21	22	25	20	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	20
04	E S 16	E S 13	E S 14	E S 16	E S 16	19	E S 16	23	23	22	23	24	24	24	23	21	E S 16	18	18	E S 16	E S 16	E S 16	E S 16	19
05	20	20	E S 13	18	18	E S 16	E S 16	23	22	24	18	23	23	21	18	E S 16	E S 16	E S 16	20	20	19	E S 16	19	18
06	E S 16	18	E S 16	17	23	E S 16	19	22	21	18	21	22	22	21	17	E S 16	E S 16	17	E S 16	22	22	19	E S 16	20
07	17	E S 16	E S 16	19	19	E S 16	17	23	22	24	25	24	24	21	23	22	19	19	18	23	18	25	21	19
08	22	24	23	22	18	E S 14	E S 15	23	29	26	24	23	24	27	25	23	19	23	21	19	21	18	18	21
09	20	E S 16	E S 16	20	17	E S 16	E S 16	20	23	17	19	21	19	18	19	E S 16	E S 16	E S 16	E S 20	E S 16	E S 16	E S 17	E S 16	E S 16
10	E S 16	E S 16	E S 16	E S 13	E S 17	E S 16	E S 16	22	17	22	20	21	21	26	22	19	17	E S 16	E S 17	E S 16	E S 16	E S 16	E S 16	E S 16
11	E S 16	E S 15	E S 17	E S 16	E S 16	E S 12	E S 13	17	22	31	30	28	24	25	21	18	E S 16	E S 18	E S 15	E S 16	E S 16	E S 16	E S 16	E S 16
12	E S 16	E S 13	E S 16	E S 11	E S 13	E	E S 16	18	22	17	20	20	21	E S 16	19	20	E S 16	E S 17	E S 16	E S 16	E S 16	E S 16	E S 16	E S 14
13	E S 12	E S 16	E S 12	E S 13	E S 13	E S 16	E S 16	E S 16	21	E S 16	24	22	19	20	19	18	17	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
14	E S 16	E S 12	E S 13	E S 13	E S 12	E S 16	E S 16	E S 16	21	19	19	E S 16	19	21	21	19	E S 16	E S 16	E S 16	E S 16	E S 15	E S 15	E S 16	E S 16
15	E S 15	E S 16	E S 16	E S 16	22	21	E S 16	17	27	23	25	24	17	E S 16	20	E S 16	E S 16	E S 16	E S 16	E	E S 16	E S 16	E S 11	E S 13
16	E S 13	E S 13	E S 12	E	E S 12	E	E S 14	E S 15	E S 14	E S 16	E S 16	E S 16	18	E S 16	E S 16	E S 16	18	E S 16	E S 16	E S 16	E S 15	E S 16	E S 15	E S 20
17	E S 15	E S 11	E S 12	E S 18	E S 11	E S 15	E S 16	E S 16	17	19	20	22	22	24	21	22	20	E S 16	E S 16	E S 16	E S 13	E S 15	E S 16	18
18	E S 16	E S 15	E S 14	E	E S 12	E S 11	E S 11	E S 17	24	20	22	21	20	22	24	21	E S 16	E S 16	E S 15	E S 16	E S 16	E S 16	E S 16	E S 14
19	E S 13	E S 16	E S 12	E	E	E S 19	E S 15	24	22	E S 16	21	20	20	21	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 11	E S 16	E S 16
20	E S 15	E S 16	E	E S 12	E S 11	E S 12	E	11	E S 15	E S 16	E S 16	E S 16	18	E S 16	25	E S 16	E S 16	17	17	E S 16	E S 16	E S 16	E S 15	E S 16
21	E S 12	E S 13	E S 12	E S 18	E	E S 13	E S 16	21	E S 16	20	21	21	21	21	21	17	E S 16	E S 17	E S 12	E S 16	E S 20	E S 16	E S 16	E S 16
22	E S 16	E S 13	E S 11	E S 11	E S 12	E S 16	E S 16	E S 16	20	44	17	24	24	24	21	21	19	E S 16	E S 16	E S 16	E S 16	E	E S 16	E S 14
23	E S 16	E	E S 11	E S 12	E S 12	E	E S 15	E S 16	17	E S 16	E S 16	17	17	17	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
24	E S 16	E S 12	E S 15	E S 12	E	E S 13	E S 11	E S 16	C	C	C	C	C	C	C	C	C	C	E S 16	E S 16	E S 15	E S 16	E S 16	E S 16
25	E S 13	E S 13	E S 13	E S 13	E S 13	E S 13	E S 15	E S 16	E S 16	E S 16	18	E S 16	E S 16	17	E S 16	E S 16	E S 16	17	E S 16	E S 16	E S 16	E S 16	E S 16	E S 16
26	E S 11	E S 11	E	E	E	E	E S 16	E S 16	E S 16	E S 16	18	23	22	22	19	19	E S 16	E S 16	E S 15	E S 16	E S 16	E	E S 16	E S 11
27	E S 16	E S 11	E S 13	E S 15	E S 11	E S 13	E S 15	19	16	16	16	21	21	22	19	17	16	E S 16	E S 16	E S 16	E S 16	E C 20	E S 16	E C 19
28	E S 12	E S 12	E S 13	E S 13	E S 13	E S 13	E S 16	22	25	27	29	29	23	24	23	22	18	17	20	E S 17	E S 13	E S 20	E S 16	E S 16
29	18	E S 15	E S 14	19	20	E S 12	E S 14	17	24	24	27	28	28	27	27	25	20	17	E S 16	E S 16	E S 13	E S 11	E S 16	E S 17
30	E S 13	E S 13	E	E	E S 16	E S 15	18	21	28	28	26	36	23	23	23	24	E S 16	E S 15	E S 11	E S 12	E	E S 15	E S 16	E
MED																								
NO																								

TABLE 58

IONOSPHERIC DATA

h'F2, Km, Nov. 1956 — 75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1° W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01	270	270	290	280	250	250	240	230	250	240	240	L	L	L	L	L	230	220	240	240	250	H 250	260	250
02	245	250	260	270	285	300	270	230	235	240	U L 230	L	L	L	L	L	L	230	220	240	230	240	240	240
03	250	250	300	280	260	240	240	L	L	L	230	L	L	L	240	L	250	240	230	210	240	250	250	260
04	250	250	240	270	280	270	250	250	250	U L 240	L	U L 240	L	L	L	240	L	U L 250	220	230	240	230	240	250
05	250	250	240	250	240	240	230	L	L	240	L	250	L	L	270	L	L	L	230	230	240	230	250	250
06	250	290	280	250	250	230	260	U L 240	230	U L 250	L	L	L	L	L	L	L	L	230	240	240	250	230	250
07	260	280	270	250	240	240	240	240	L	L	L	L	L	L	L	L	L	230	250	240	250	250	230	240
08	250	280	300	300	270	220	220	240	U L 240	U L 240	U L 240	U L 230	U L 240	U L 240	U L 250	U L 250	L	230	240	230	240	240	260	270
09	260	260	250	250	250	240	240	240	240	250	H 240	230	220	250	230	230	230	240	250	260	270	270	280	330
10	340	300	290	290	280	U S 310	340	280	240	230	230	230	230	240	U L 260	240	230	230	U S 240	250	330	F 420	F 370	380
11	F 320	F 300	380	450	F 380	330	F 300	270	230	220	230	L	L	L	L	L	L	250	220	280	270	280	240	270
12	280	240	230	240	270	280	250	250	L	L	L	L	L	L	L	250	L	240	220	250	250	270	F 300	F 380
13	320	300	270	260	280	300	290	240	240	240	L	L	L	L	L	L	L	220	230	230	240	240	280	320
14	350	360	F 400	F 340	310	320	310	270	L	L	L	L	L	L	L	L	260	240	280	350	320	270	270	F 410
15	430	F 340	F 310	340	F 270	U B 530	F 440	360	320	U L 300	U L 290	L	L	L	L	250	240	240	230	230	250	300	340	F 340
16	F 340	F 350	310	F 320	F 310	310	300	260	240	250	U L 250	L	L	L	L	250	L	L	220	220	220	240	240	240
17	250	250	250	280	270	330	280	230	240	L	L	240	L	L	L	L	L	220	230	230	250	250	260	280
18	270	300	310	320	310	290	250	230	240	L	250	L	L	L	L	250	H 230	220	230	220	220	230	240	260
19	240	250	230	250	260	280	270	240	L	L	L	240	240	L	L	250	L	220	240	220	230	240	250	250
20	250	250	240	240	250	250	F 280	L	L	230	L	L	L	L	L	L	L	220	230	240	250	240	270	250
21	280	290	260	300	280	300	310	280	250	260	250	L	U L 240	L	L	L	230	220	220	220	250	240	240	240
22	240	250	270	280	280	270	260	260	L	230	L	L	L	L	L	L	250	240	240	250	250	270	270	250
23	220	210	250	240	210	190	230	250	240	230	L	L	L	U L 240	L	L	U L 240	U L 240	220	220	210	250	210	230
24	F 230	F 250	F 260	260	U S 240	230	230	230	C	C	C	C	C	C	C	C	C	C	220	240	230	230	240	220
25	230	230	250	260	280	250	260	250	L	L	L	L	L	L	L	L	L	240	220	240	230	230	230	250
26	240	230	240	230	220	270	260	240	L	L	L	L	L	250	L	L	L	220	230	220	240	210	230	240
27	260	270	290	280	260	250	250	240	220	220	230	220	250	240	U L 230	230	230	240	250	220	250	240	290	240
28	U S 210	240	U S 240	260	280	270	260	250	230	240	U L 240	L	L	L	L	L	L	L	230	220	230	250	250	250
29	260	260	270	270	270	250	240	240	220	L	L	260	240	250	L	250	230	240	230	230	220	250	240	250
30	260	260	260	260	250	250	270	250	230	220	L	250	L	L	L	L	L	L	240	240	230	240	260	270
MED	260	260	260	270	270	270	260	240	240	240	240	240	U 240	U 240	U 240	250	230	240	230	230	240	240	250	250
NO	30	30	30	30	30	30	30	27	19	19	13	10	7	7	6	11	12	24	30	30	30	30	30	30

CENTRAL RADIO PROPAGATION LABORATORY, NATIONAL BUREAU OF STANDARDS, BOULDER, COLO.

TABLE 59
IONOSPHERIC DATA

h'FI, Km, Nov. 1956 — 75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1° W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01								Q	235	230	215	220	225	230	225	225	Q	Q						
02								Q	230	220	220	H 200	225	225	225	230	225	Q						
03								235	210	215	215	210	230	H 220	225	230	225	220						
04								230	230	225	220	220	220	230	230	225	230	220						
05								230	225	220	220	220	230	220	220	230	230	220						
06								230	230	220	215	225	220	230	230	230	235	250						
07								Q	220	220	215	225	220	230	230	235	240	Q						
08								Q	225	215	215	215	210	210	230	225	230	Q						
09								Q	Q	220	220	220	220	225	Q	Q	Q	Q						
10								Q	Q	Q	Q	Q	Q	215	230	Q	Q	Q						
11								Q	Q	Q	220	H 205	H 210	220	230	225	230	Q						
12								Q	225	220	225	220	230	230	240	230	215	Q						
13								Q	A 220	A 210	220	220	230	220	230	235	230	Q						
14								Q	240	H 205	230	225	230	230	230	240	Q							
15								Q	U B 260	240	230	240	230	240	235	Q	Q	Q						
16								Q	Q	220	H 220	H 190	210	H 215	230	235	230	240						
17								Q	230	230	220	225	220	230	230	230	220	Q						
18								Q	Q	220	215	220	220	220	225	225	210	Q						
19								Q	225	220	220	210	220	220	220	220	215	Q						
20								245	230	230	220	225	230	240	225	230	230	Q						
21								Q	Q	240	230	230	220	225	230	235	Q	Q						
22								Q	230	I B 225	220	220	230	220	230	230	230	Q						
23								Q	Q	235	210	H 210	H 210	225	230	225	220	220						
24								Q	C	C	C	C	C	C	C	C	C	C						
25								Q	220	215	H 215	220	220	215	220	225	230	220						
26								Q	220	220	220	220	210	220	215	220	230	Q						
27								Q	Q	210	Q	Q	225	215	220	Q	Q	Q						
28								Q	Q	220	215	220	215	220	230	230	225	225						
29								Q	Q	215	215	220	210	225	220	220	Q							
30								Q	Q	Q	220	220	215	235	230	230	235	235						
MED								230	230	220	220	220	220	225	230	230	230	220						
NO								5	17	25	27	27	28	29	28	25	21	9						

TABLE 60
IONOSPHERIC DATA

h'E, Km, Nov. 1956 — 75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1° W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01								B 121	B 115	121 107	99 101	 101	99 101	111 101	99 111	101 109	109 111	B S						
02								B 109	109 115	101 107	101 101	101 101	H 101	H 103	101 111	109 109	111 111	S S						
03								U B 121	115 109	107 109	H 101	H 101	I A 101	101 109	111 109	109 111	111 111	S A						
04								B 109	A 109	101 109	101 A	105 A	109 A	105 A	109 101	111 U A	111 A	A A						
05								B 109	U B 113	U B 101	A 101	A 109	A U A	A 111	 111	U A 115	A 119	A A						
06								B 115	H 105	 105	H 108	U A 111	U A A	111 A	I A 109	119 111	119 111	A A						
07								B 109	B 109	U B 109	U A 109	I A 109	U A 109	109 109	109 109	111 111	111 111	B S						
08								B 123	 123	E A 121	I A 111	101 101	E A 117	U A 121	U A 111	A A	A A	A S						
09								B 107	H 107	H 109	H 107	U A 107	A 105	E B 117	U B 109	U A 109	117 111	S S						
10								E B 127	121 119	I B 123	U B 125	119 111	H 111	H 111	109 109	109 111	111 111	S S						
11								S 119	U B 109	H 109	H 109	109 109	H 105	105 109	H 109	115 111	115 111	S S						
12								A 109	A 109	A 109	A 109	A 109	U A 109	109 109	107 111	109 111	H 119	S S						
13								109 109	H 109	109 109	109 109	H 109	105 109	109 109	111 109	111 109	111 111							
14								109 109	B 103	H 111	119 111	109 109	U A 109	101 109	109 109	111 115	H 121	S S						
15								H 109	H 101	H 101	H 103	H 101	H 101	111 111	111 109	109 119	119 119	S S						
16								S 109	B 109	H 111	U A 103	U A 115	U A 109	109 109	111 111	H 111	H 111	S S						
17								B 121	H 121	109 109	105 105	109 105	101 101	U A 101	103 109	115 109	U A 119	S S						
18								A 111	111 101	101 101	109 101	109 109	109 109	H 109	109 115	109 109	H 111	S S						
19								B 111	111 109	H 109	H 109	H 109	H 109	H 109	109 109	115 115	119 119	S S						
20								S 115	115 113	I B 113	H 111	111 111	111 111	115 115	H 115	H 119	H 129	S S						
21								S 109	109 109	H 101	101 101	I A 101	U A 101	109 109	111 111	109 109	111 111	S S						
22								S C	C C	C C	C C	C C	C C	C C	C C	C C	C C	C C						
23								S 111	111 109	105 105	105 105	105 105	101 101	109 109	105 109	109 109	115 109	S S						
24								A 111	H 111	H 105	105 105	109 109	109 109	U A 109	109 109	U A 109	A 109	S S						
25								S 107	107 107	107 107	105 105	105 105	I A 109	109 109	107 109	109 109	113 111	S S						
26								S 129	129 115	115 115	113 113	111 111	111 111	111 111	111 111	111 111	111 111	S S						
27								S 120	H 120	H 111	109 109	109 109	I A 109	109 109	103 109	109 109	A 109							
28								B 121	121 121	121 115	115 115	115 115	111 111	109 109	111 111	109 109	A 109	A A						
29																								
30																								
MED								109	111	109	107	109	109	109	109	110	113							
NO								5	23	27	27	26	26	26	29	28	23							

TABLE 61
IONOSPHERIC DATA

(M3000) F2, Nov. 1956 — 75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1° W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01	280	280	265	275	285	285	300	310	315	320	315	280	285	280	280	280	290	285	290	295	U R 310	R 295	310	315
02	310	290	300	275	275	275	280	320	325	340	300	290	285	280	285	290	285	285	285	300	275	280	300	285
03	280	270	250	260	270	270	260	300	310	300	300	295	285	285	280	285	280	280	295	290	285	290	295	275
04	290	290	295	280	F 275	280	280	270	330	310	305	300	290	280	280	280	280	280	290	280	290	U S 300	285	285
05	295	295	285	290	300	300	300	320	330	330	305	290	290	280	275	270	280	275	285	295	295	285	300	290
06	285	275	270	290	300	290	280	310	320	300	300	295	275	275	275	280	275	275	280	290	280	280	300	290
07	270	260	275	285	295	295	295	310	310	305	300	280	285	280	275	270	285	280	280	290	290	300	295	280
08	295	280	270	265	280	295	290	320	325	320	315	300	300	280	285	280	280	290	290	295	290	285	275	280
09	280	295	290	300	295	290	290	315	320	315	H 310	U S 295	285	280	270	280	U S 270	280	275	270	270	U S 275	260	U S 250
10	240	240	U S 250	250	U F 230	F 225	230	270	290	305	295	S 280	270	270	265	265	U S 280	U S 285	U S 270	U S 285	230	U F 240	U F 260	U F 250
11	U F 260	U F 250	F 240	F 230	F 240	F 240	U F 260	F 285	325	305	295	285	290	280	275	275	270	280	265	270	250	245	280	250
12	F 280	U F 280	F 275	F 285	F 270	F 260	F 290	300	320	310	295	280	275	275	265	285	F 285	285	285	U F 280	295	270	U F 260	U F 240
13	U F 270	U F 290	U F 280	U F 290	U F 270	U F 290	F 290	F 320	320	315	310	305	300	280	280	280	295	290	295	290	290	295	F 280	F 260
14	F 250	U F 250	U F 245	U F 260	U F 245	U F 250	U F 260	F 280	F 290	300	290	285	280	275	275	270	270	290	245	U F 245	F 260	U F 290	U F 280	U F 220
15	U F 230	U F 250	U F 270	U F 250	U F 300	F 220	U F 230	F 240	305	295	300	275	F 280	290	F 280	F 295	F 300	300	300	U F 290	U F 290	U F 270	F 240	U F 250
16	U F 260	U F 245	U F 280	U F 260	U F 260	U F 270	U F 280	F 300	325	310	300	290	285	290	285	285	290	295	295	300	285	295	295	290
17	290	300	295	F 285	F 280	270	280	300	340	315	305	300	285	280	290	285	280	300	U S 285	290	290	285	280	260
18	270	F 250	240	F 260	F 270	250	F 280	F 320	330	310	310	305	U S 295	295	295	295	H 290	300	295	295	290	320	F 300	305
19	310	300	F 300	F 290	F 290	F 280	290	305	330	320	310	310	300	290	295	300	295	300	300	305	300	305	300	300
20	F 300	F 305	F 300	U F 310	U F 300	F 280	F 290	310	320	320	305	300	285	295	290	295	290	290	295	300	285	295	U F 290	280
21	270	F 280	260	255	F 270	U F 265	U F 270	F 310	310	310	295	300	300	290	290	280	285	290	295	315	290	300	290	295
22	295	U F 300	F 280	F 280	U F 270	F 265	F 270	F 310	330	305	H 300	300	290	290	285	280	285	280	280	275	280	F 250	280	285
23	270	270	280	275	F 290	U F 280	F 320	F 290	F 315	315	295	295	290	290	295	285	290	290	290	295	F 290	295	295	U F 310
24	U F 305	U F 290	U F 295	U F 295	U F 305	U F 300	U F 310	U F 310	C	C	C	C	C	C	C	C	C	C	U F 300	300	310	U F 295	U F 295	U F 310
25	U F 310	U F 300	U F 290	F 290	F 290	F 290	F 290	315	320	320	300	260	295	300	285	280	285	290	285	295	300	310	F 290	F 275
26	U F 290	U F 290	U F 295	F 320	F 300	F 290	F 295	U F 310	315	320	310	295	U S 280	295	290	290	300	300	300	300	310	320	F 310	U F 300
27	U F 290	U F 300	U F 280	U F 285	F 290	F 290	U F 290	F 310	U S 305	320	U S 315	U S 305	300	305	U S 295	300	300	290	U S 295	290	260	U S 270	260	U S 285
28	280	F 270	265	260	265	260	290	U S 305	320	320	305	300	290	295	285	290	290	290	285	290	290	U P 295	290	280
29	F 290	275	265	265	280	285	290	300	320	310	310	310	300	300	285	285	290	285	290	275	295	295	290	270
30	265	265	275	290	290	275	270	290	320	305	295	300	280	280	280	275	280	275	285	295	305	F 295	F 295	300
MED	280	280	280	280	280	280	290	310	320	310	300	295	285	280	285	280	285	290	290	290	290	295	290	280
NO	30	30	30	30	30	30	30	30	29	29	29	29	29	29	29	29	29	29	30	30	30	30	30	30

CENTRAL RADIO PROPAGATION LABORATORY, NATIONAL BUREAU OF STANDARDS, BOULDER, COLO.

TABLE 62

IONOSPHERIC DATA

(M3000) F1, Nov. 1956 — 75° W Mean Time

Station Washington, D.C. Lat. 38.7°N Lang. 77.1° W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01								Q	L	L	L	L	L	L	L	L	Q	Q						
02								Q	L	L	L	L	L	L	L	L	L	Q						
03								L	L	L	L	L	L	L	L	L	L	L						
04								L	L	L	L	L	L	L	L	L	L	L						
05								L	L	L	L	L	L	L	365	L	L	L						
06								L	L	L	L	L	L	L	L	L	L	L						
07								Q	L	L	L	L	L	L	L	L	L	Q						
08								Q	L	L	L	L	L	L	L	L	L	Q						
09								Q	Q	L	L	L	L	L	Q	Q	Q	Q						
10								Q	Q	Q	Q	Q	Q	L	L	Q	Q	Q						
11								Q	Q	Q	L	L	L	L	L	L	L	Q						
12								Q	L	L	L	L	L	L	L	L	L	Q						
13								Q	A	A	L	L	L	L	L	L	L	Q						
14								Q	L	L	L	L	L	L	L	L	Q							
15								Q	L	L	L	L	L	L	L	Q	Q	Q						
16								Q	Q	L	L	L	L	L	L	L	L	L						
17								Q	L	L	L	L	L	L	L	L	L	Q						
18								Q	Q	L	L	L	L	L	L	L	L	Q						
19								Q	L	L	L	L	L	L	L	L	L	Q						
20								L	L	L	L	L	L	L	L	L	L	Q						
21								Q	Q	L	L	L	L	L	L	L	Q	Q						
22								Q	L	B	L	L	L	L	L	L	L	Q						
23								Q	Q	L	L	L	L	L	L	L	L	L						
24								Q	C	C	C	C	C	C	C	C	C	C						
25								Q	L	L	L	L	L	L	L	L	L	L						
26								Q	L	L	L	L	L	L	L	L	L	Q						
27								Q	Q	L	Q	Q	L	L	L	Q	Q	Q						
28								Q	Q	L	L	L	L	L	L	L	L	L						
29								Q	Q	L	L	L	L	L	L	L	Q							
30								Q	Q	Q	L	L	L	L	L	L	L	L						
MED																								
NO															1									

CENTRAL RADIO PROPAGATION LABORATORY, NATIONAL BUREAU OF STANDARDS, BOULDER, COLO.

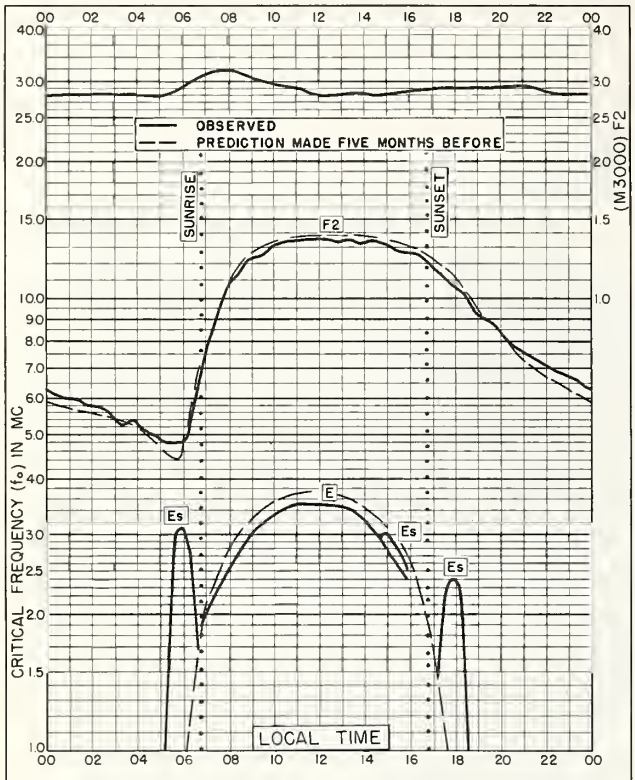

Fig. 1. WASHINGTON, D. C.
38.7°N, 77.1°W NOVEMBER 1956

NBS 503

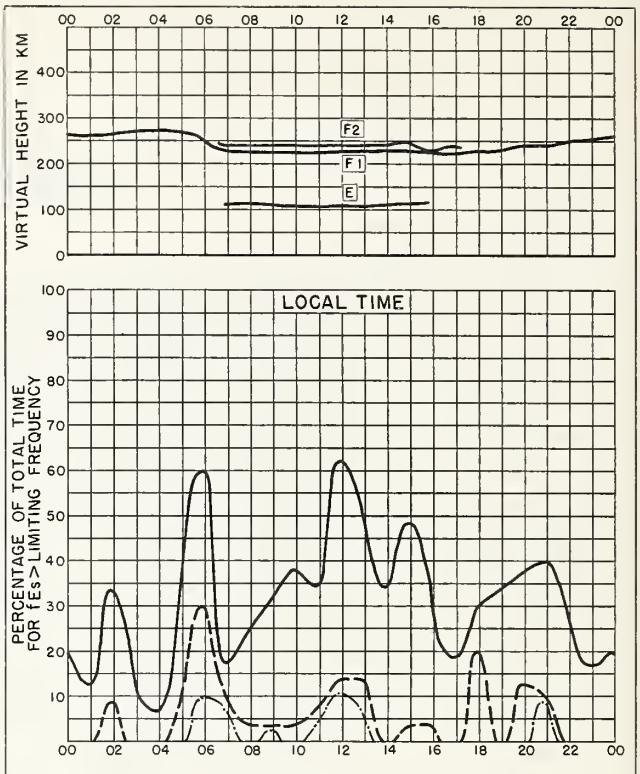

Fig. 2. WASHINGTON, D. C. NOVEMBER 1956

NBS 490

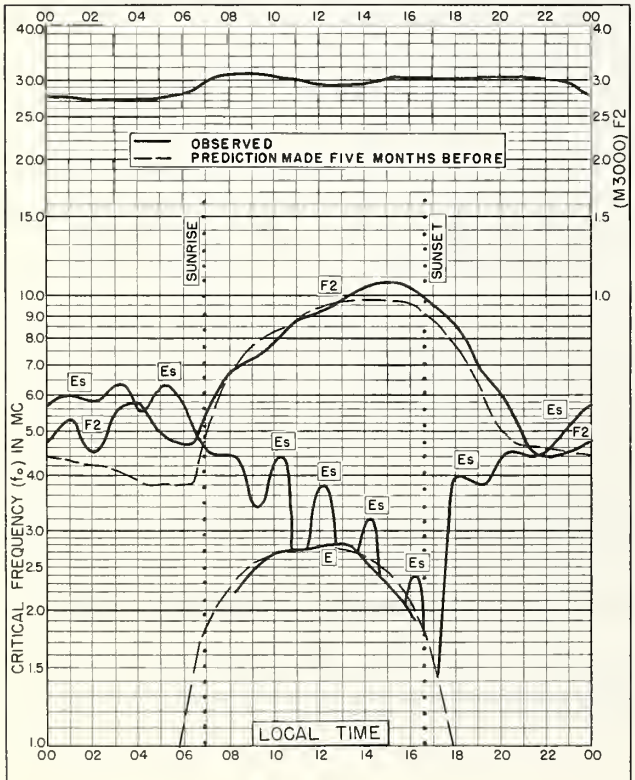

Fig. 3. FAIRBANKS, ALASKA
64.9°N, 147.8°W OCTOBER 1956

NBS 503

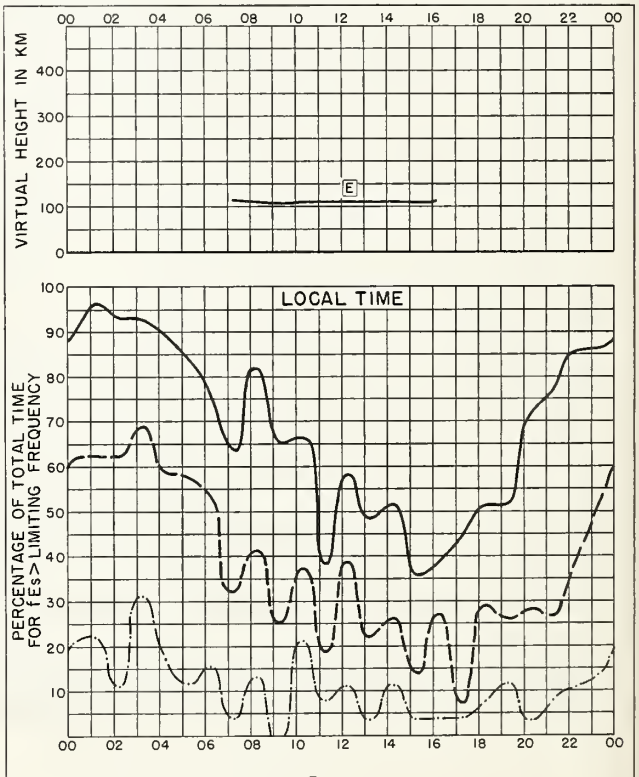

Fig. 4. FAIRBANKS, ALASKA OCTOBER 1956

NBS 490

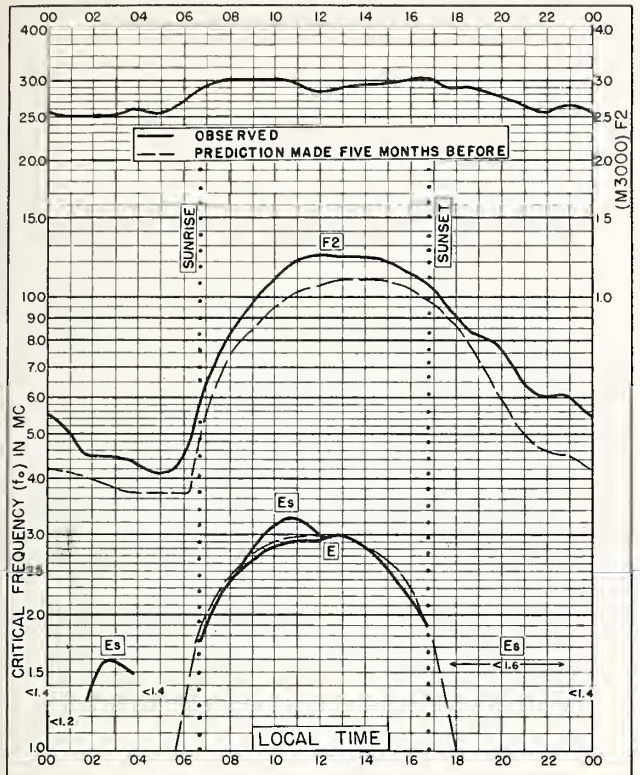

Fig. 5. OSLO, NORWAY
60.0°N, 11.1°E OCTOBER 1956

NBS 503

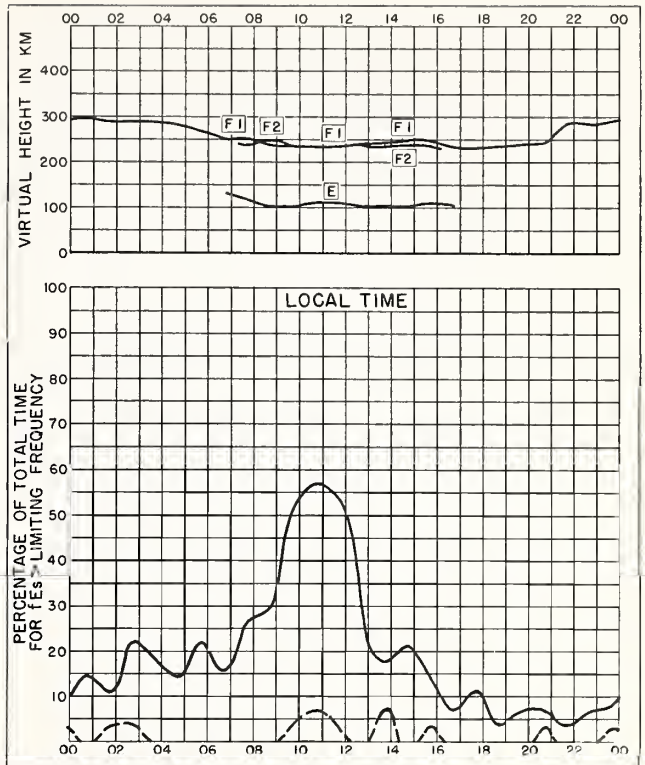

Fig. 6. OSLO, NORWAY OCTOBER 1956

NBS 490

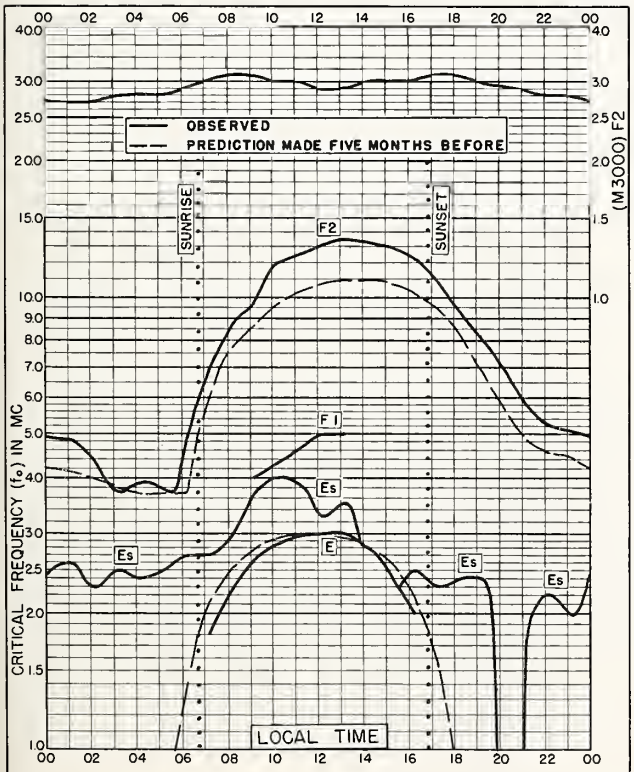

Fig. 7. UPSALA, SWEDEN
59.8°N, 17.6°E OCTOBER 1956

NBS 503

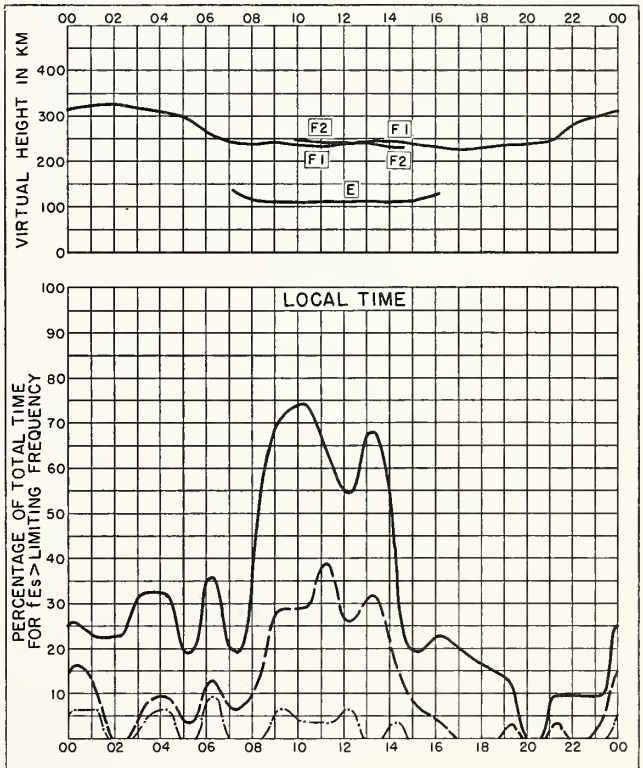

Fig. 8. UPSALA, SWEDEN OCTOBER 1956

NBS 490

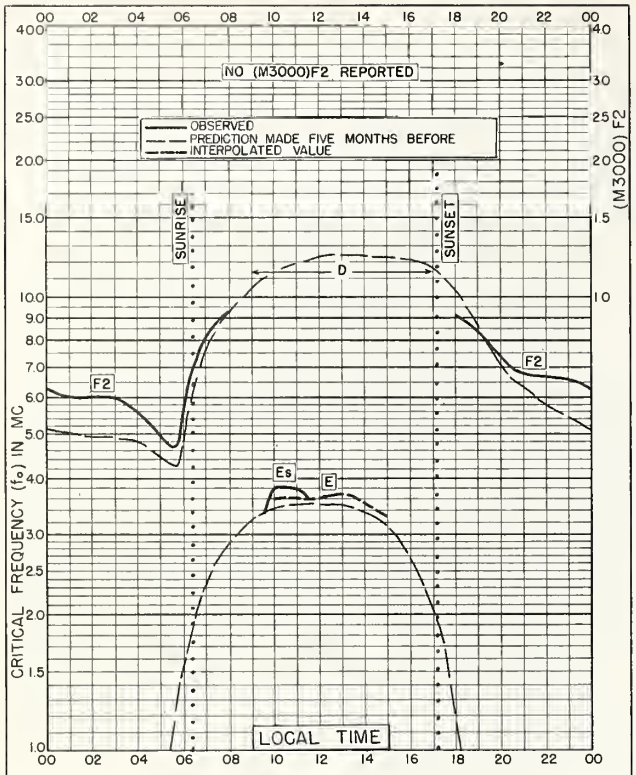

Fig. 9. GRAZ, AUSTRIA
47.1°N, 15.5°E OCTOBER 1956

NBS 503

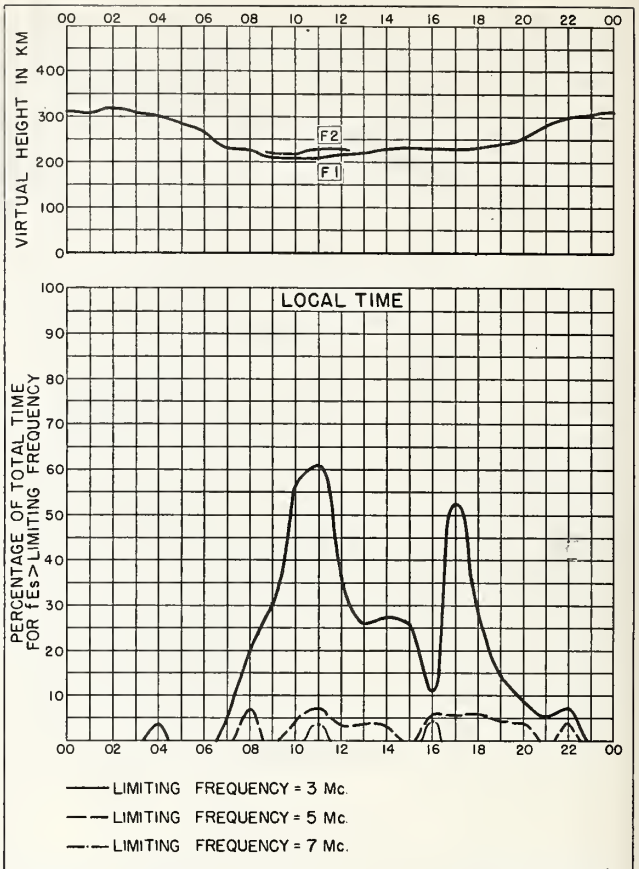

Fig. 10. GRAZ, AUSTRIA OCTOBER 1956

NBS 490

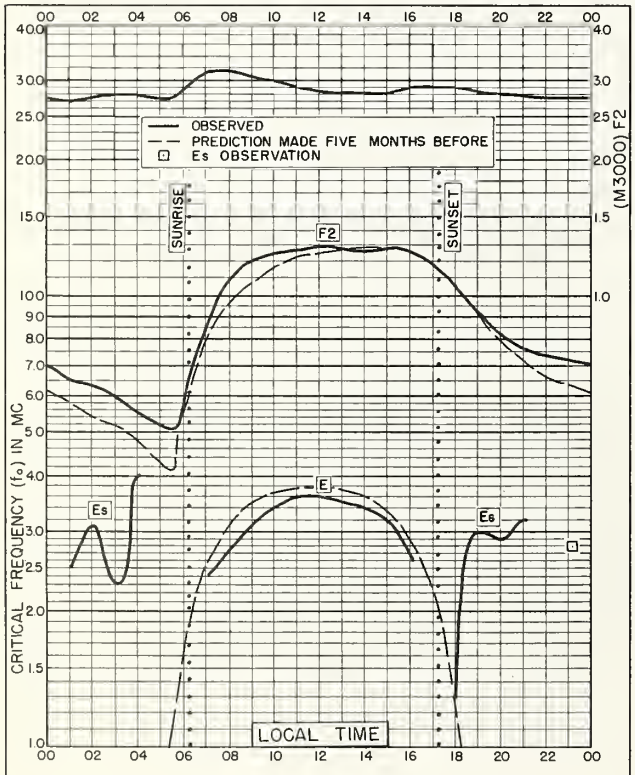

Fig. 11. FT. MONMOUTH, NEW JERSEY
40.3°N, 74.1°W OCTOBER 1956

NBS 503

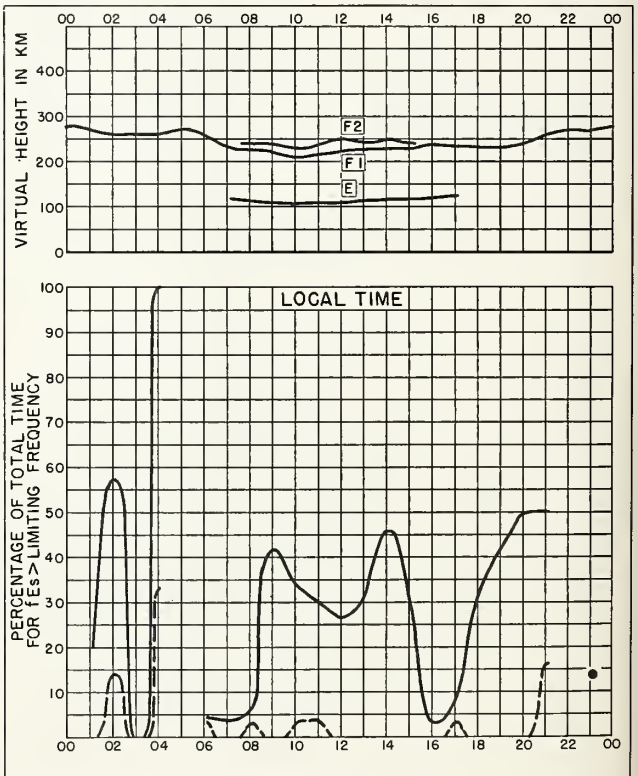

Fig. 12. FT. MONMOUTH, NEW JERSEY OCTOBER 1956

NBS 490

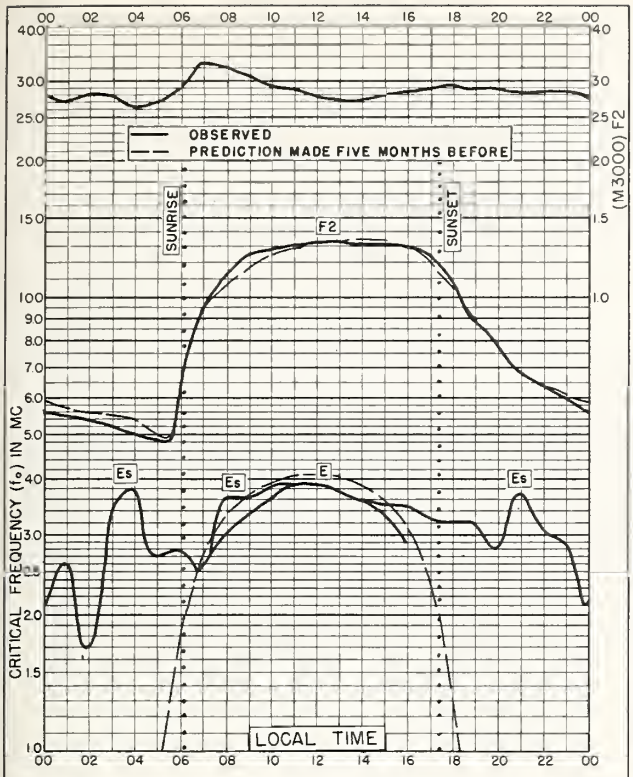

Fig. 13. WHITE SANDS, NEW MEXICO
32.3°N, 106.5°W OCTOBER 1956

NBS 503

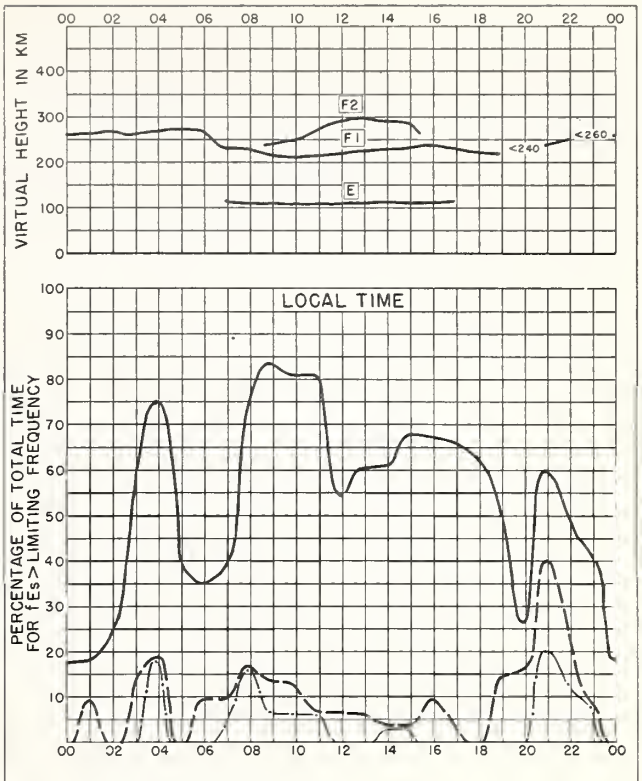

Fig. 14. WHITE SANDS, NEW MEXICO
OCTOBER 1956

NBS 490

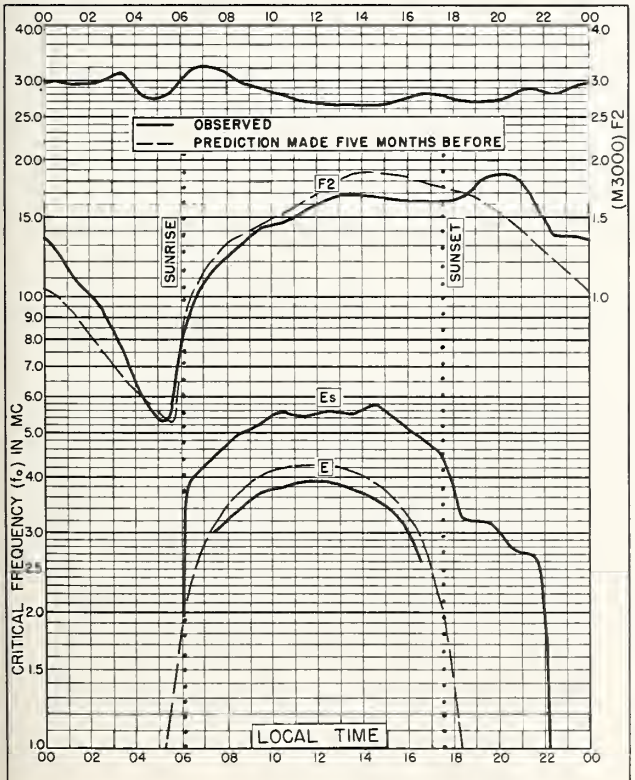

Fig. 15. OKINAWA I.
26.3°N, 127.8°E OCTOBER 1956

NBS 503

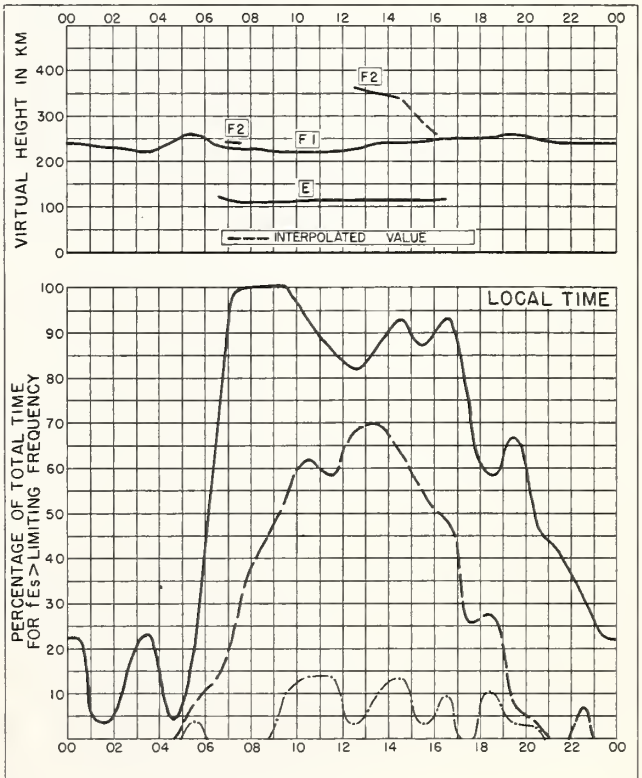

Fig. 16. OKINAWA I. OCTOBER 1956

NBS 490

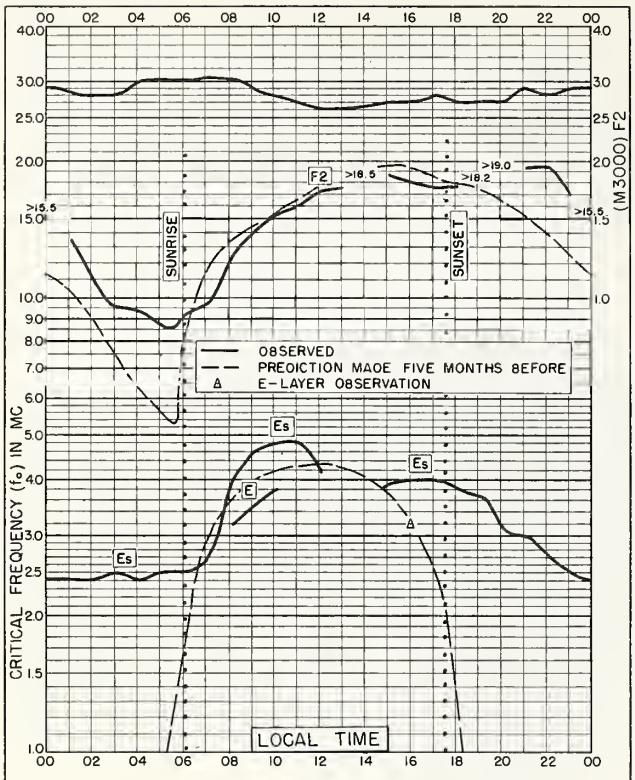

Fig. 17. FORMOSA, CHINA
25.0°N, 121.5°E OCTOBER 1956

NBS 503

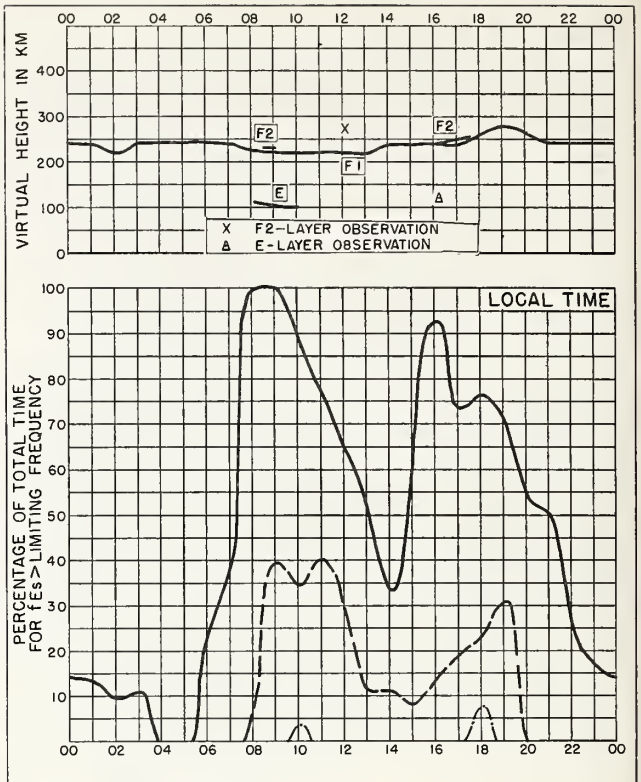

Fig. 18. FORMOSA, CHINA OCTOBER 1956

NBS 490

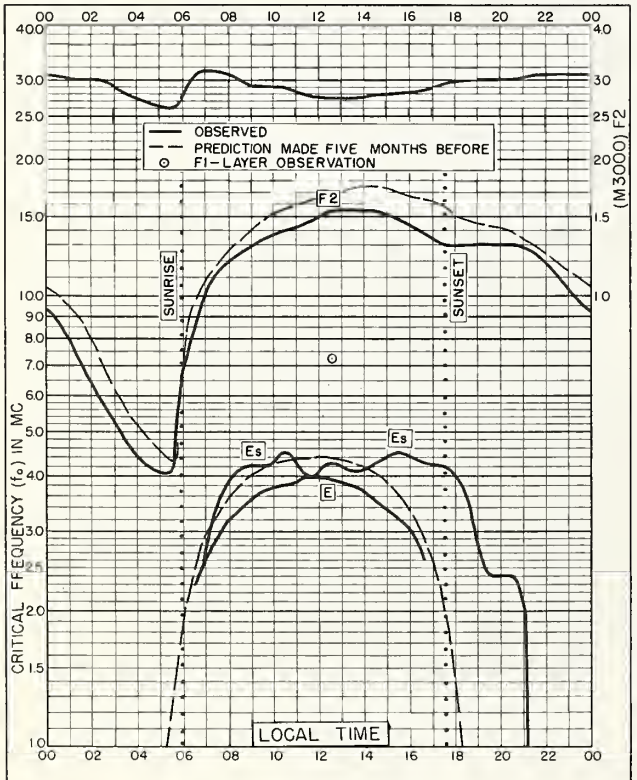

Fig. 19. MAUI, HAWAII
20.8°N, 156.5°W OCTOBER 1956

NBS 503

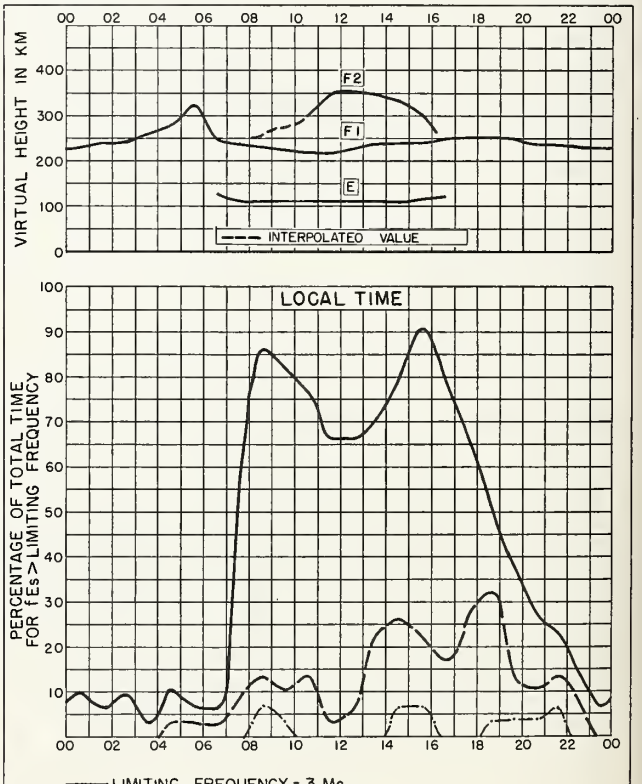

Fig. 20. MAUI, HAWAII OCTOBER 1956

NBS 490

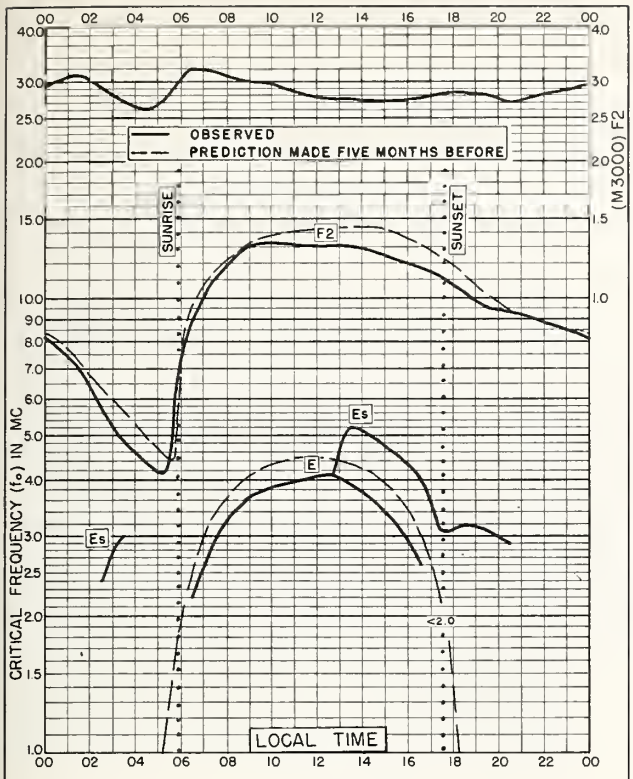

Fig. 21. PUERTO RICO, W. I.
18.5°N, 67.2°W OCTOBER 1956

NBS 503

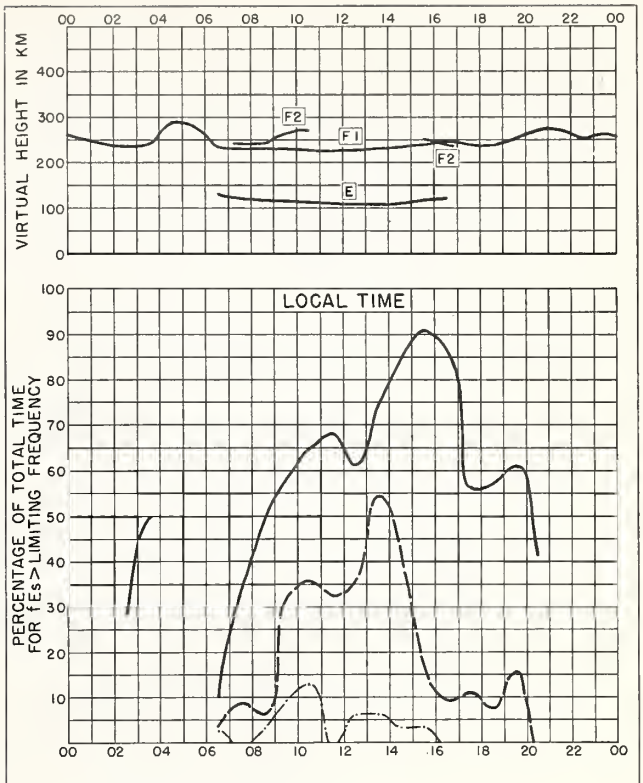

Fig. 22. PUERTO RICO, W. I. OCTOBER 1956

NBS 490

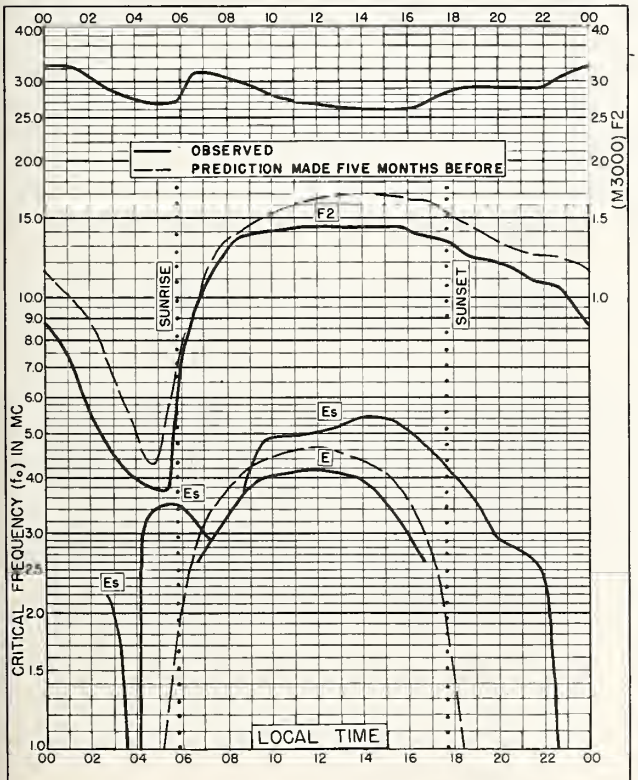

Fig. 23. PANAMA CANAL ZONE
9.4°N, 79.9°W OCTOBER 1956

NBS 503

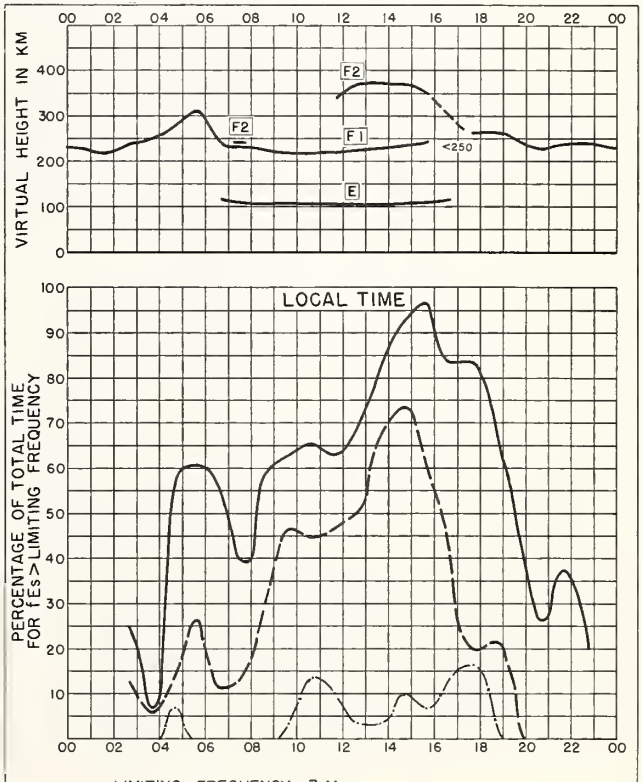

Fig. 24. PANAMA CANAL ZONE OCTOBER 1956

NBS 490

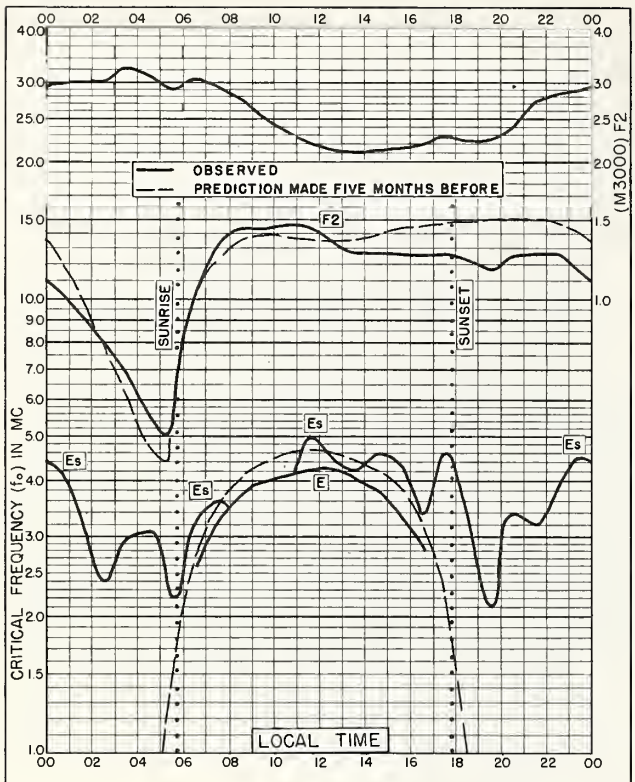

Fig. 25. TALARA, PERU
4.6°S, 81.3°W OCTOBER 1956

NBS 503

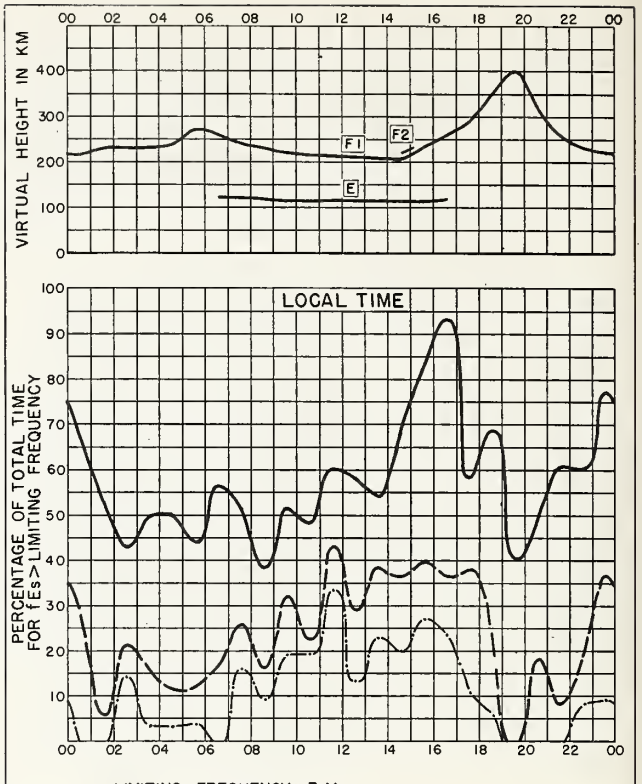

Fig. 26. TALARA, PERU OCTOBER 1956

NBS 490

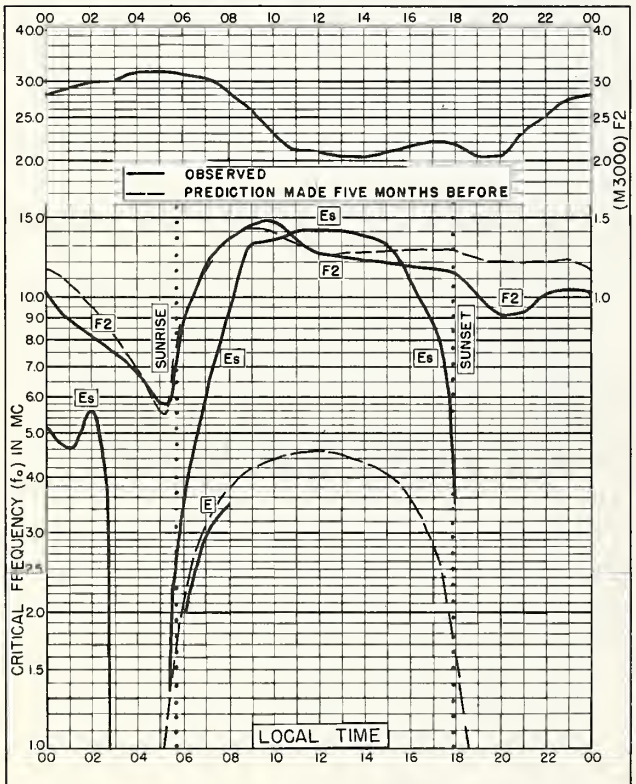

Fig. 27. HUANCAYO, PERU
12.0°S, 75.3°W OCTOBER 1956

NBS 503

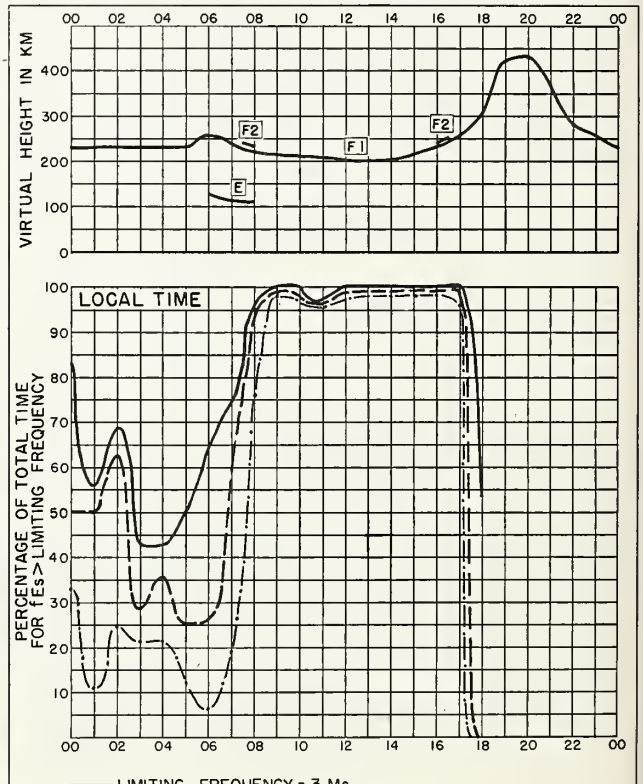

Fig. 28. HUANCAYO, PERU OCTOBER 1956

NBS 490

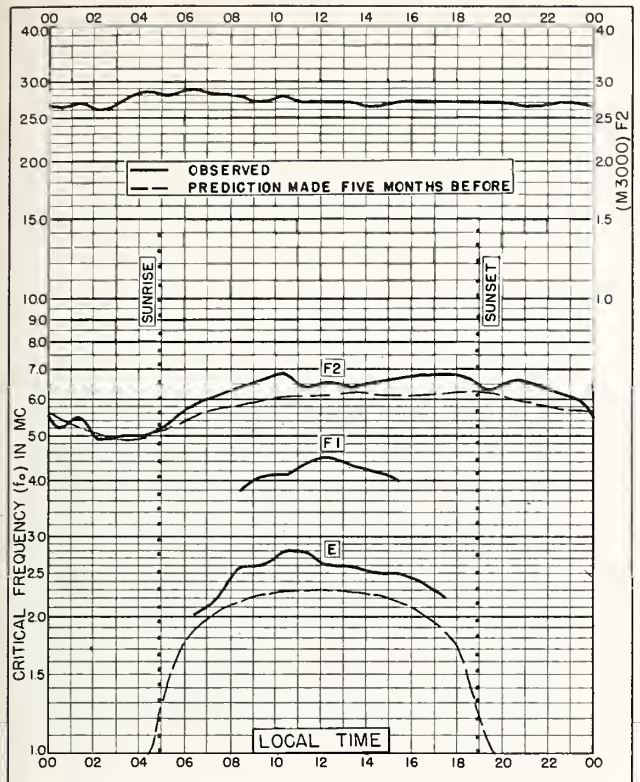

Fig. 29. THULE, GREENLAND
77.0°N, 69.0°W SEPTEMBER 1956

NBS 503

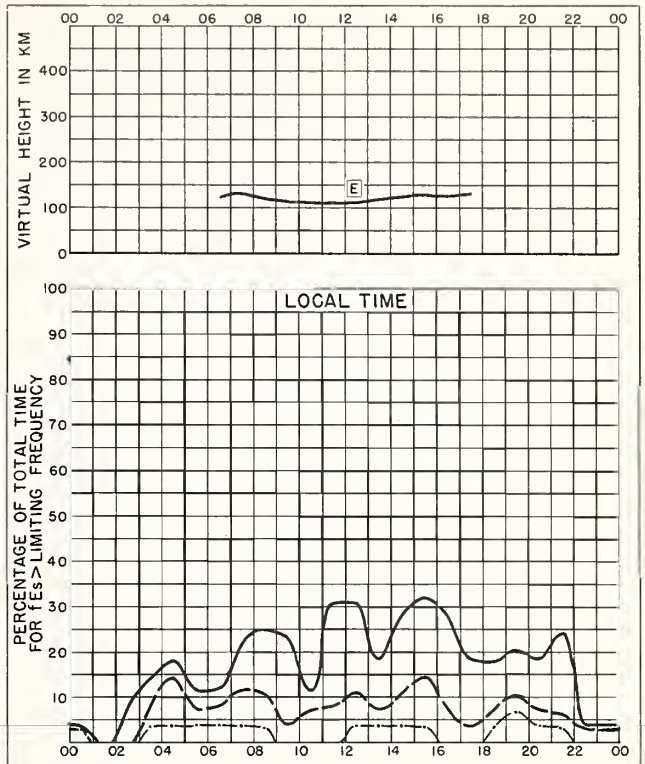

Fig. 30. THULE, GREENLAND SEPTEMBER 1956

NBS 490

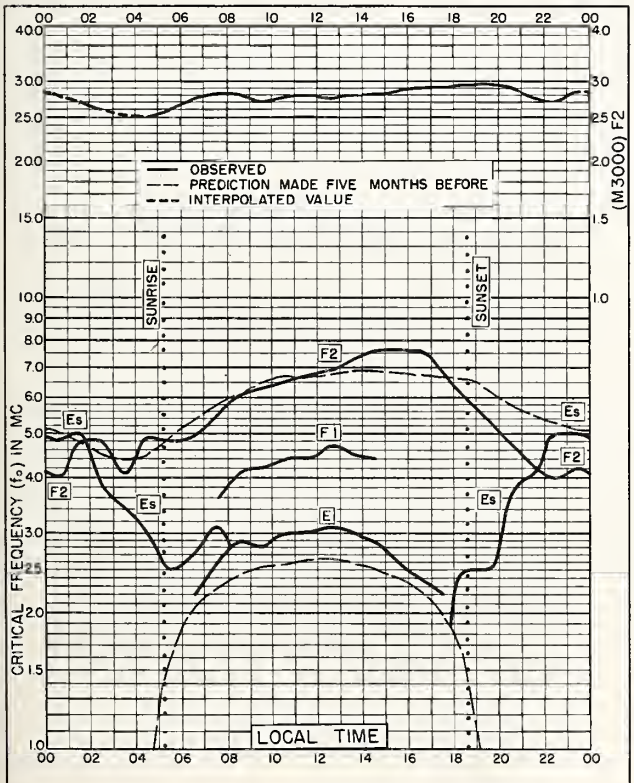

Fig. 31. POINT BARROW, ALASKA
71.3°N, 156.8°W SEPTEMBER 1956

NBS 503

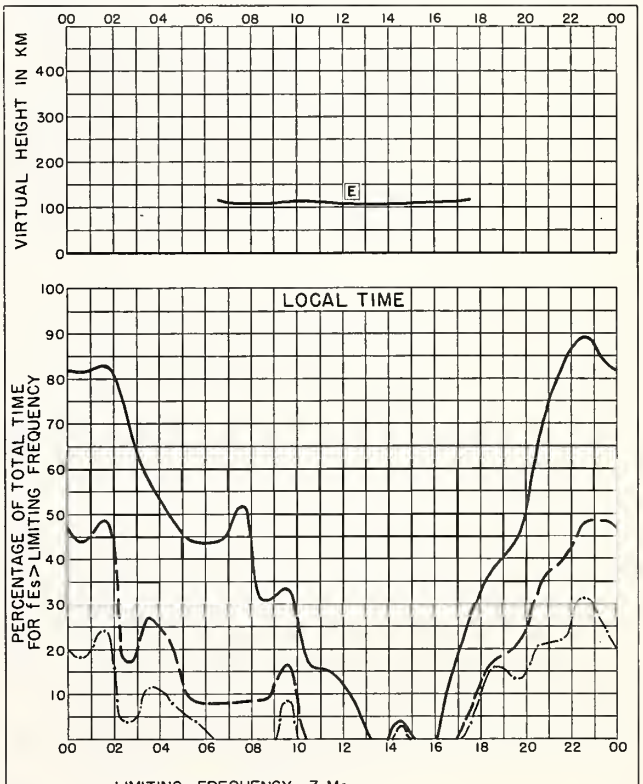

Fig. 32. POINT BARROW, ALASKA SEPTEMBER 1956

NBS 490

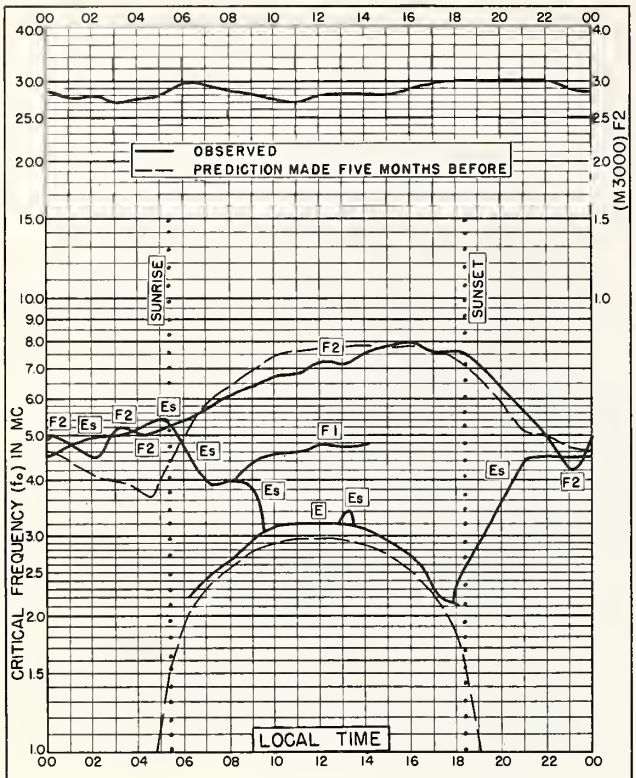

Fig. 33. FAIRBANKS, ALASKA
64.9°N, 147.8°W SEPTEMBER 1956

NBS 503

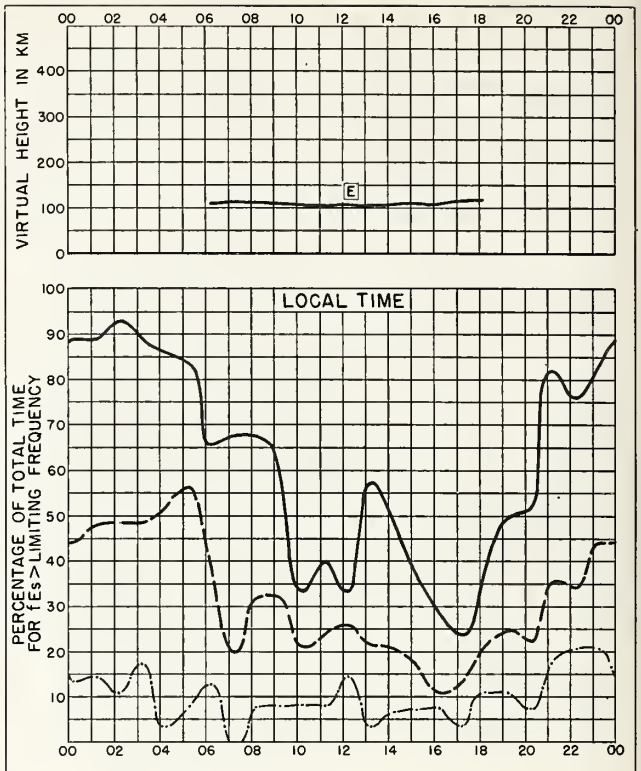

Fig. 34. FAIRBANKS, ALASKA SEPTEMBER 1956

NBS 490

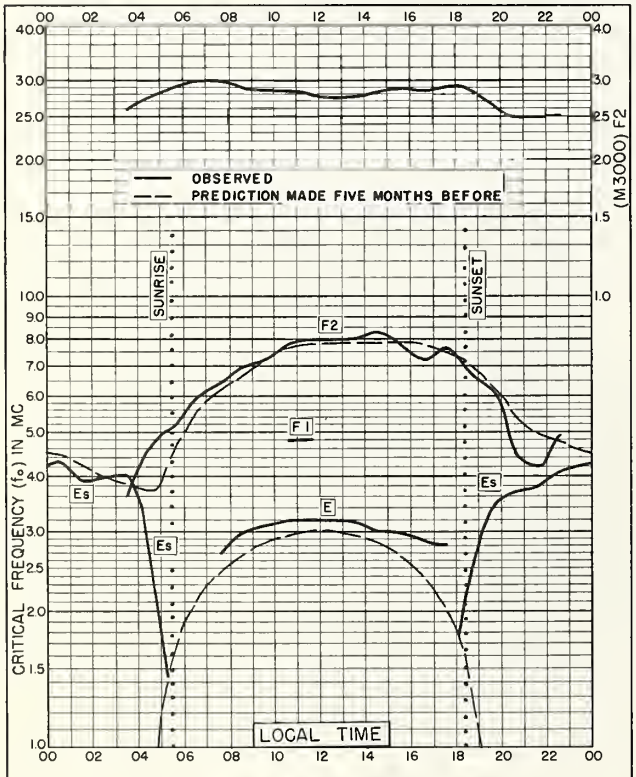

Fig. 35. REYKJAVIK, ICELAND
64.1°N, 21.8°W SEPTEMBER 1956

NBS 503

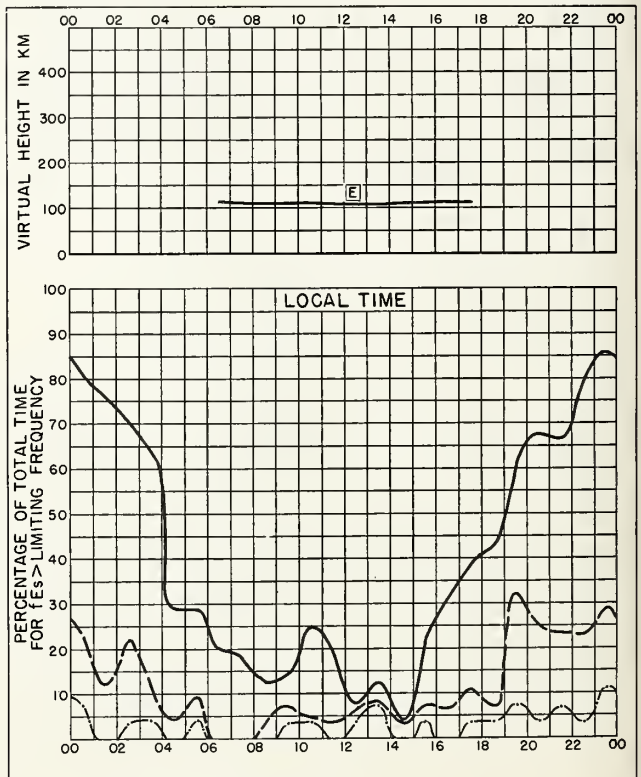

Fig. 36. REYKJAVIK, ICELAND SEPTEMBER 1956

NBS 490

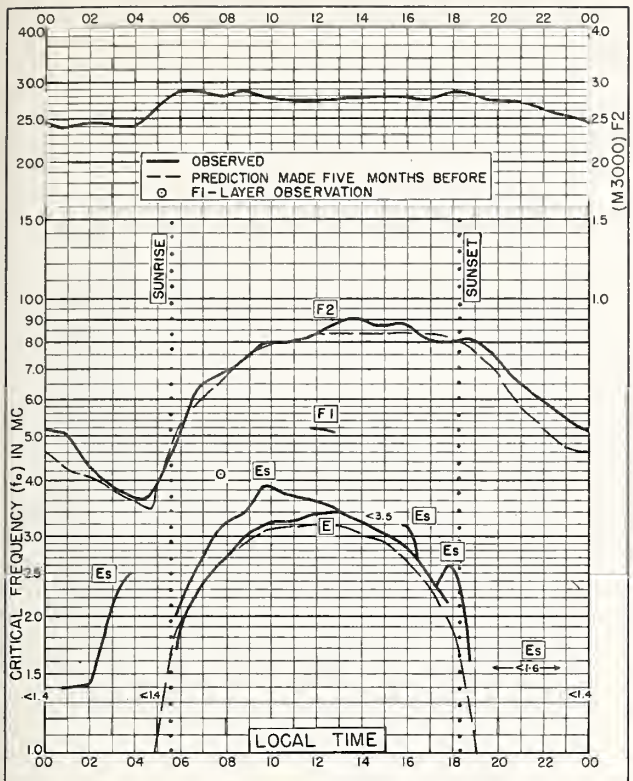

Fig. 37. OSLO, NORWAY
60.0°N, 11.1°E SEPTEMBER 1956

NBS 503

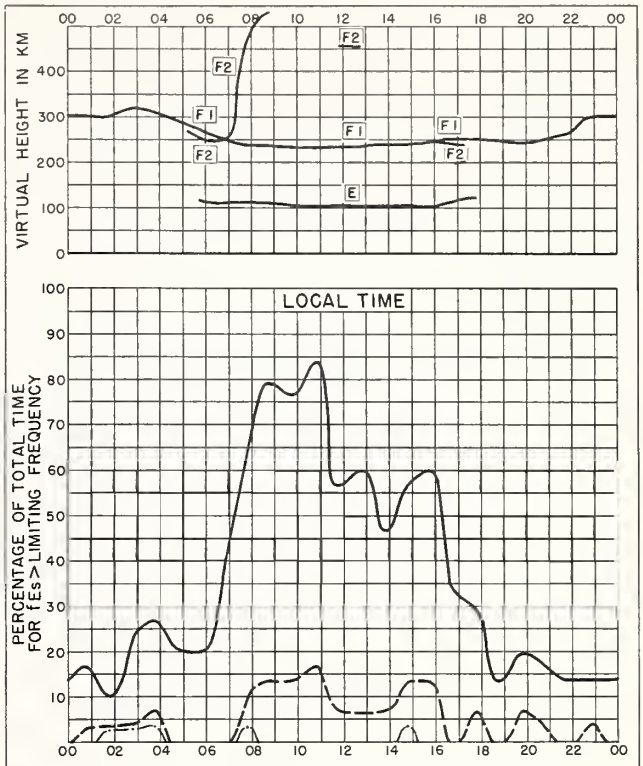

Fig. 38. OSLO, NORWAY SEPTEMBER 1956

NBS 490

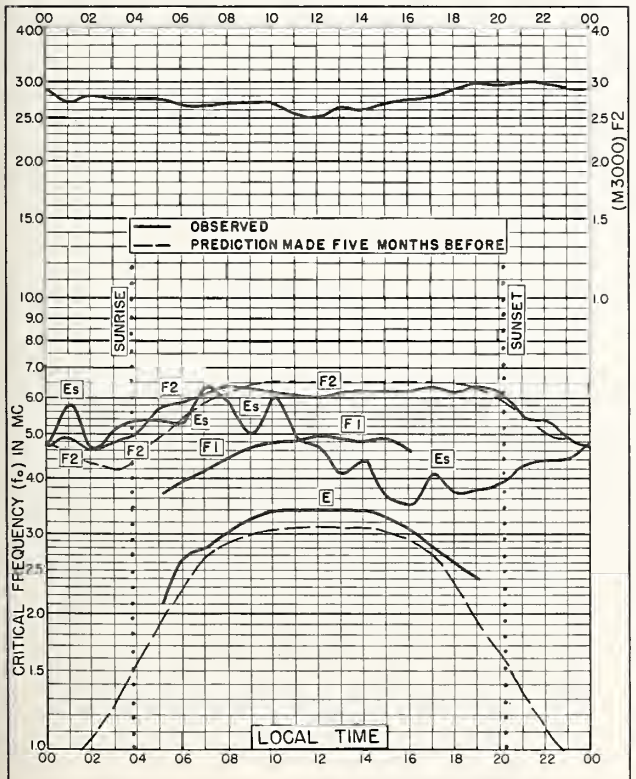

Fig. 39. FAIRBANKS, ALASKA
64.9°N, 147.8°W AUGUST 1956

NBS 503

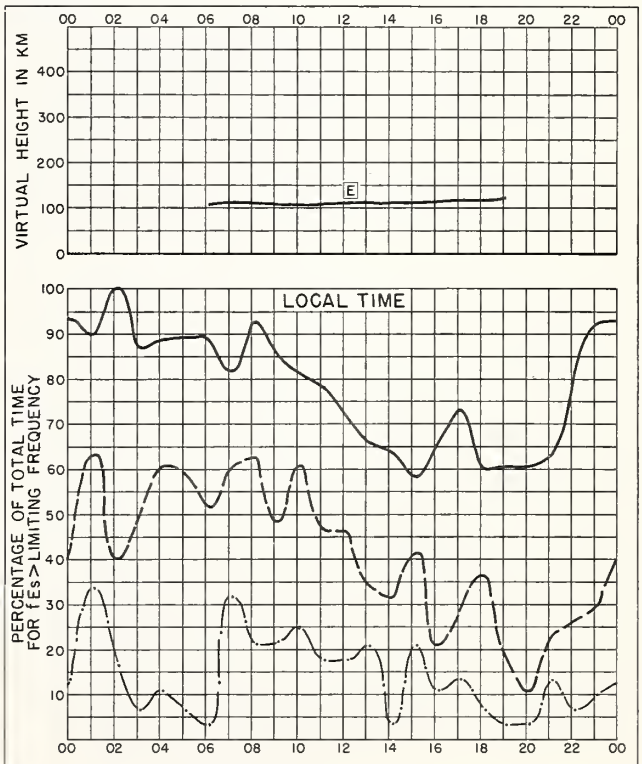

Fig. 40. FAIRBANKS, ALASKA AUGUST 1956

NBS 490

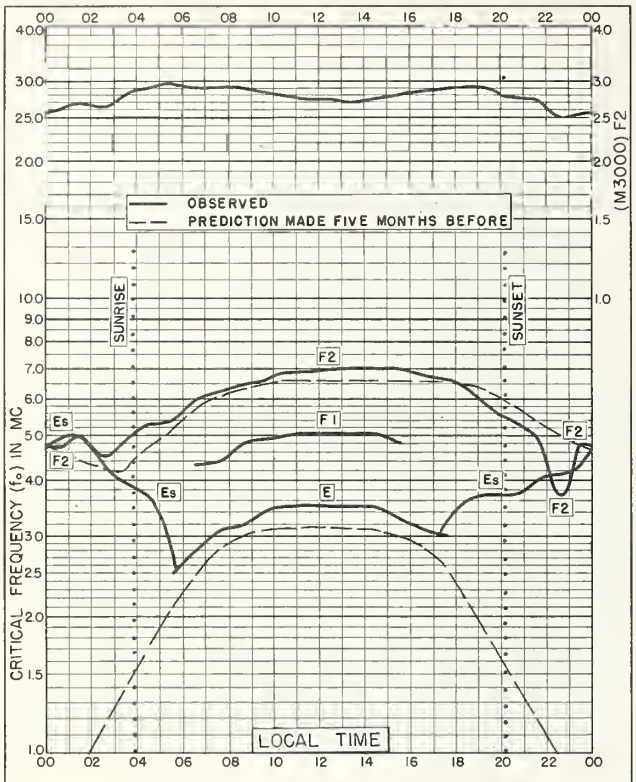

Fig. 41. REYKJAVIK, ICELAND
64.1°N, 21.8°W AUGUST 1956

NBS 503

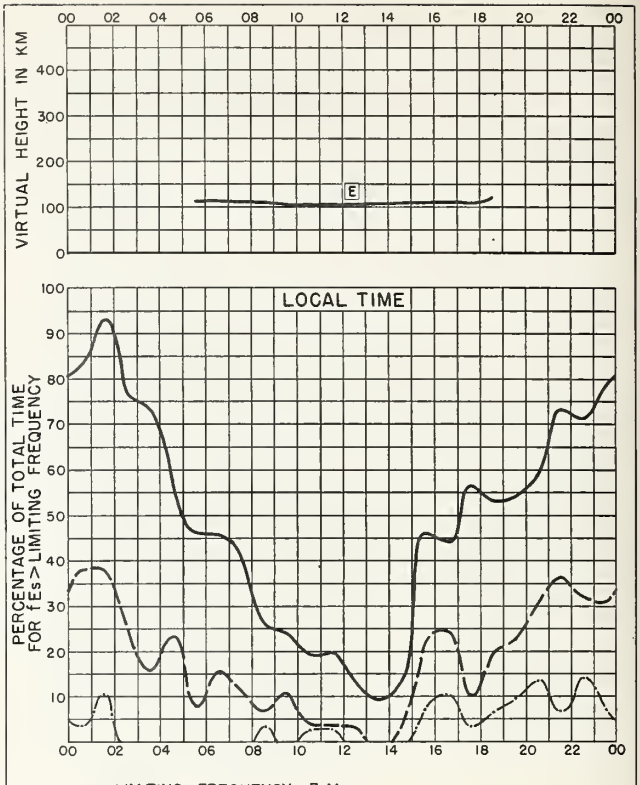

Fig. 42. REYKJAVIK, ICELAND AUGUST 1956

NBS 490

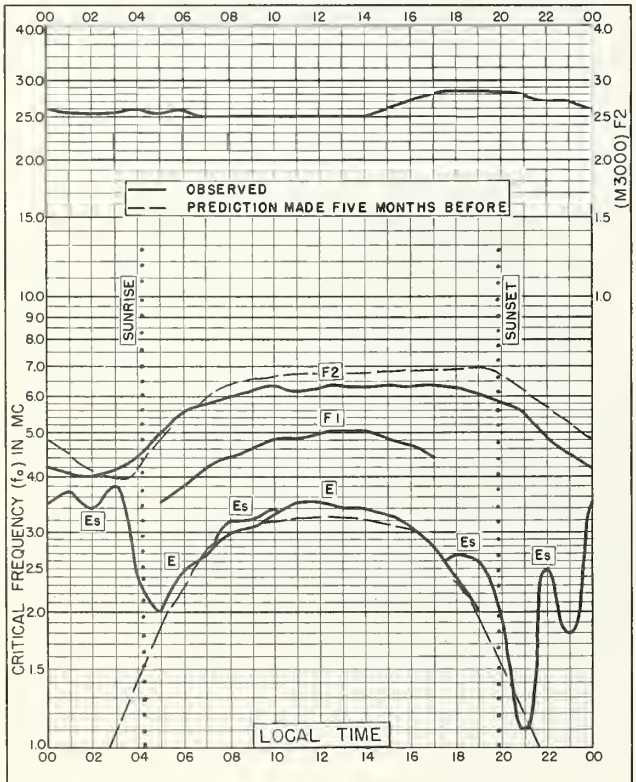

Fig. 43. ANCHORAGE, ALASKA
61.2°N, 149.9°W AUGUST 1956

NBS 503

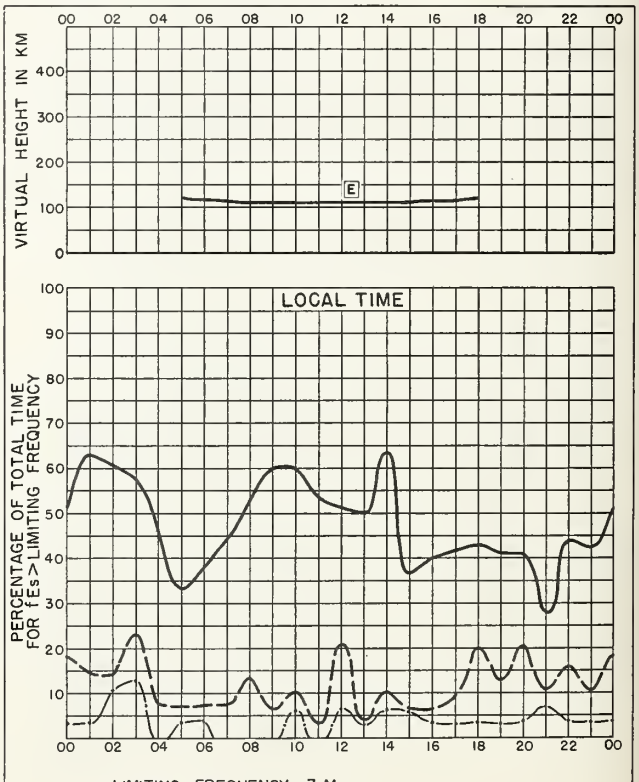

Fig. 44. ANCHORAGE, ALASKA AUGUST 1956

NBS 490

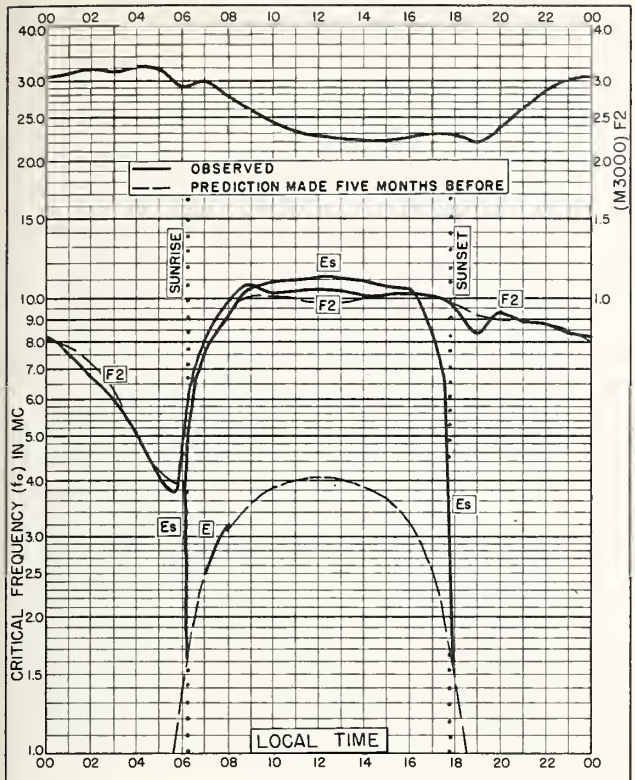

Fig. 45. HUANCAYO, PERU
12.0°S, 75.3° W AUGUST 1956

NBS 503

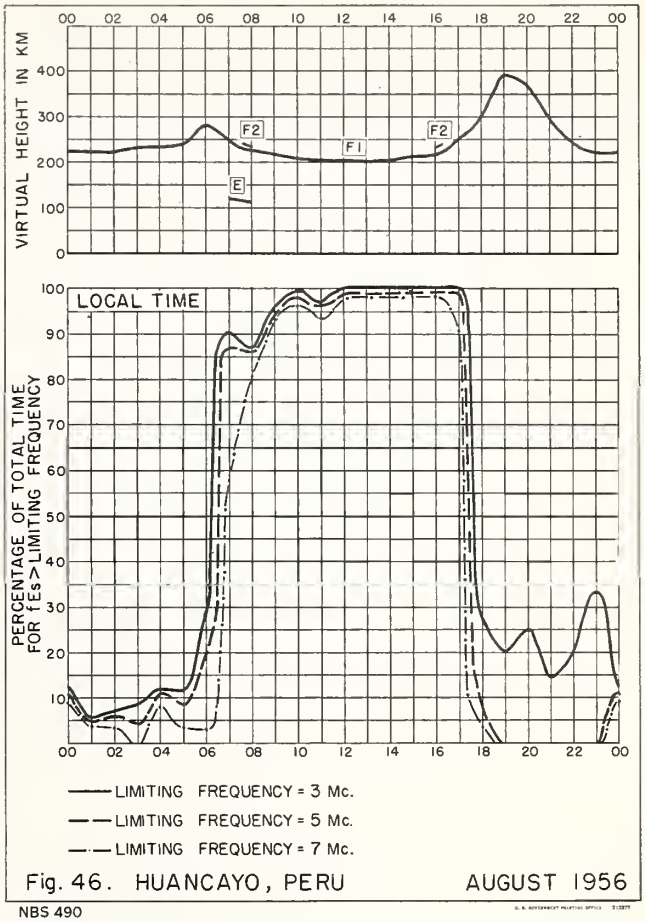

Fig. 46. HUANCAYO, PERU AUGUST 1956

NBS 490

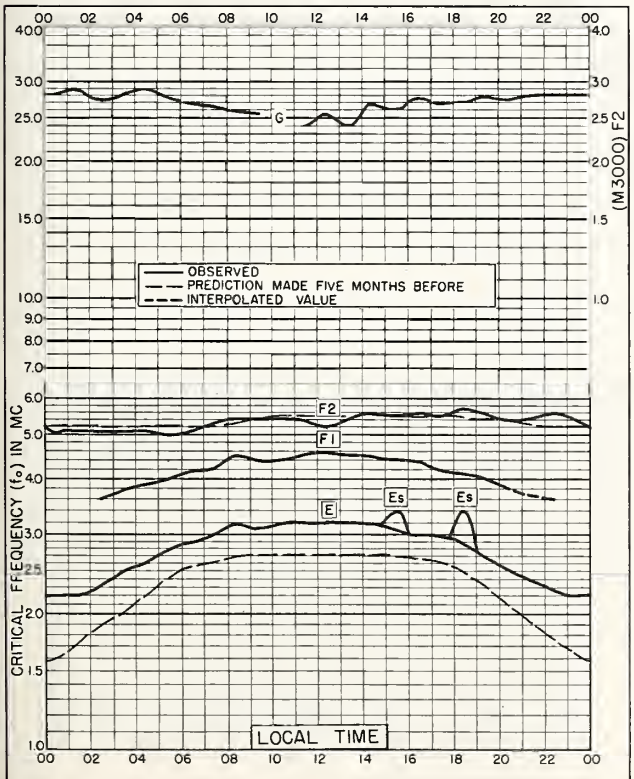

Fig. 47. THULE, GREENLAND
77.0°N, 69.0° W JULY 1956

NBS 503

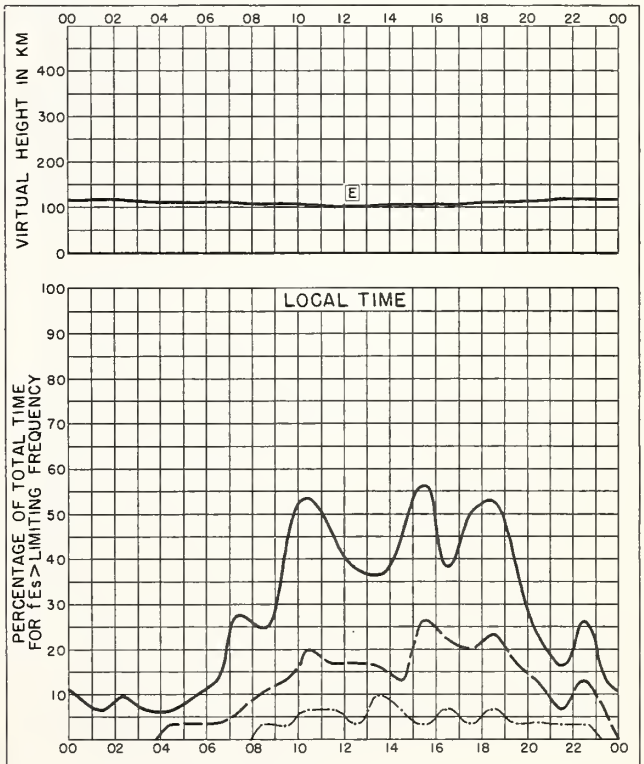

Fig. 48. THULE, GREENLAND JULY 1956

NBS 490

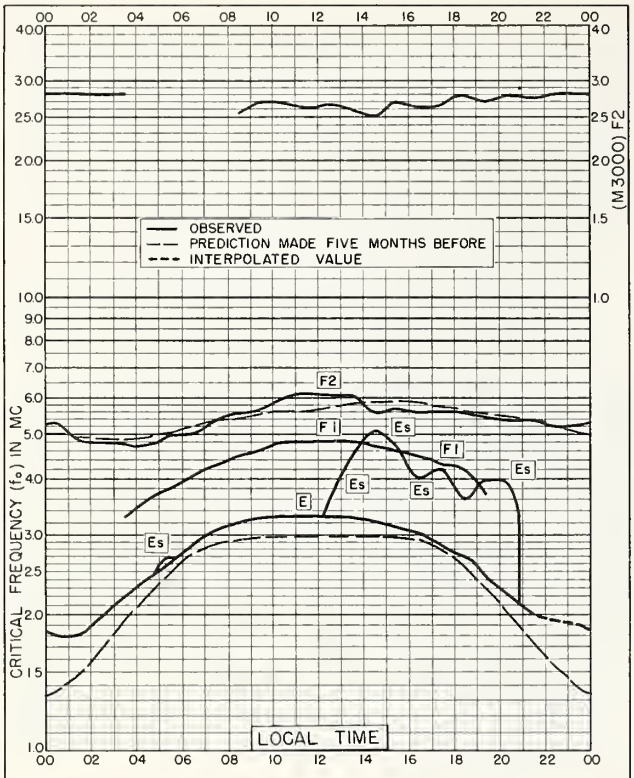

Fig. 49. GODHAVN, GREENLAND
69.2°N, 53.5°W JULY 1956

NBS 503

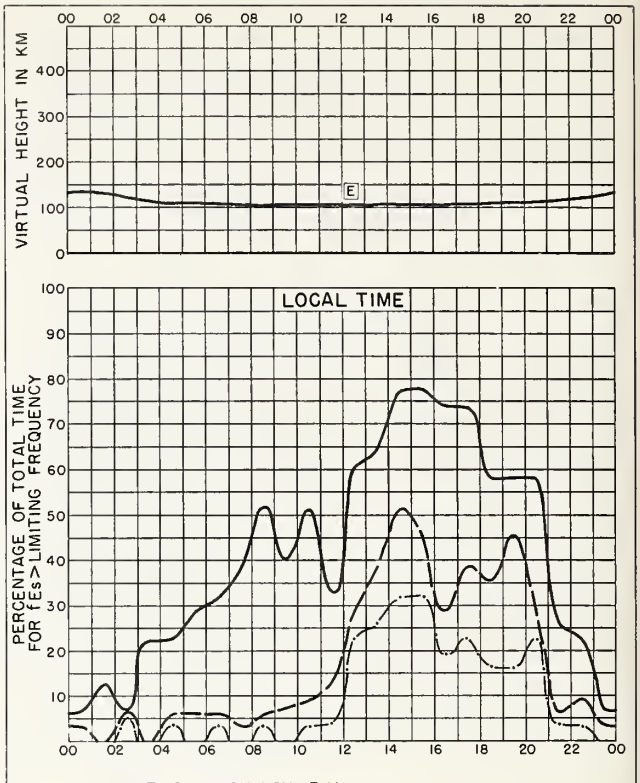

Fig. 50. GODHAVN, GREENLAND JULY 1956

NBS 490

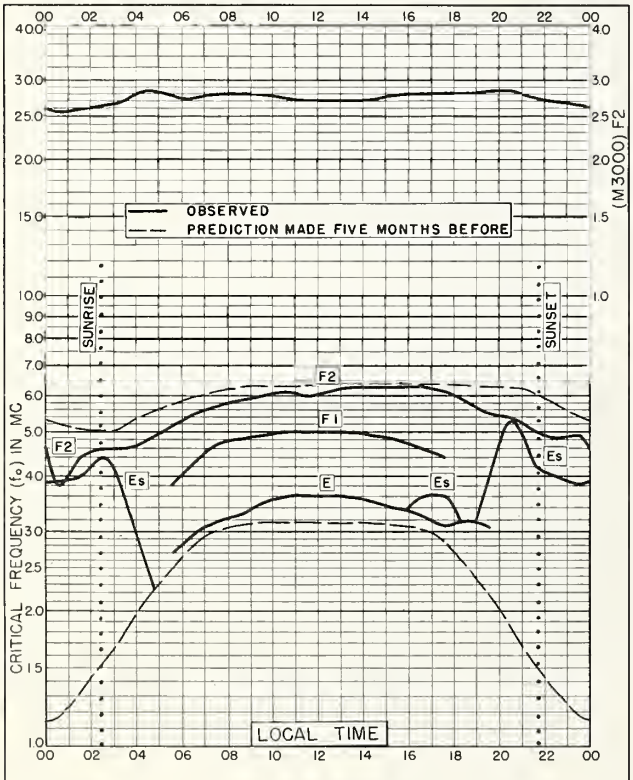

Fig. 51. REYKJAVIK, ICELAND
64.1°N, 21.8°W JULY 1956

NBS 503

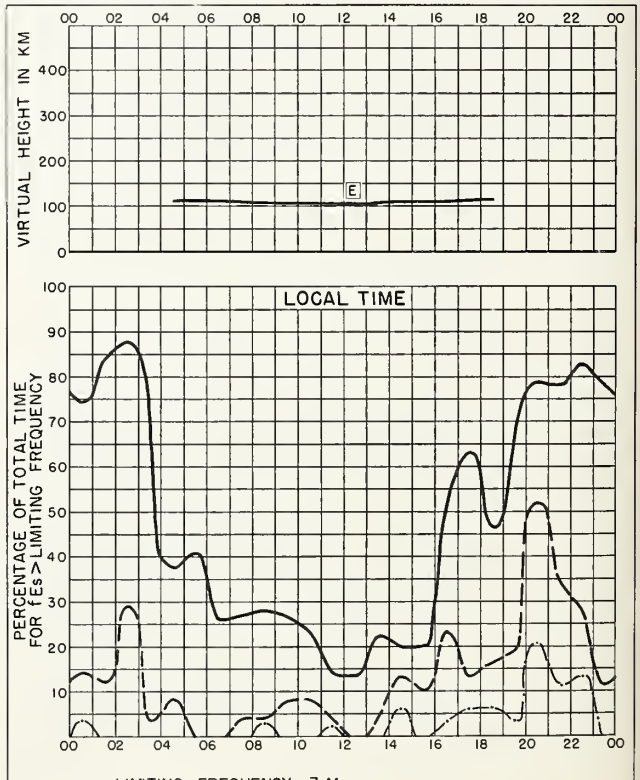

Fig. 52. REYKJAVIK, ICELAND JULY 1956

NBS 490

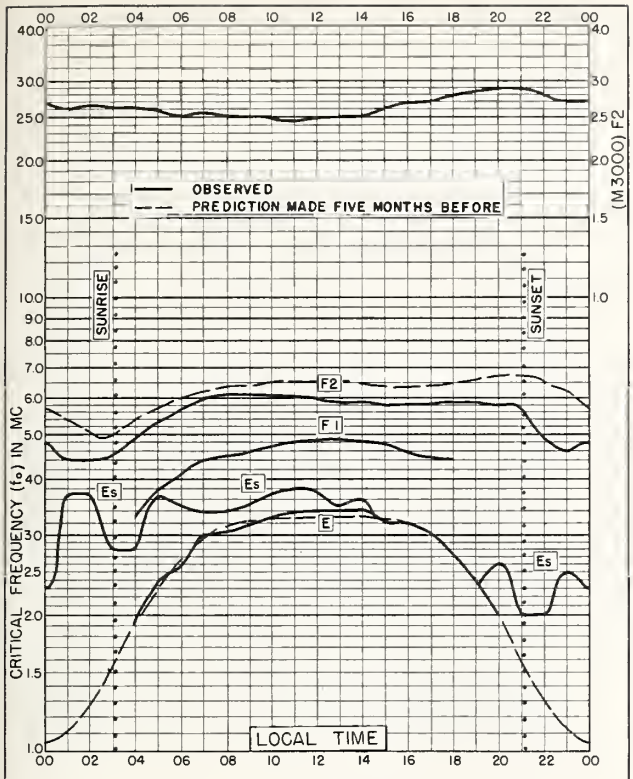

Fig. 53. ANCHORAGE, ALASKA
61.2°N, 149.9°W JULY 1956

NBS 503

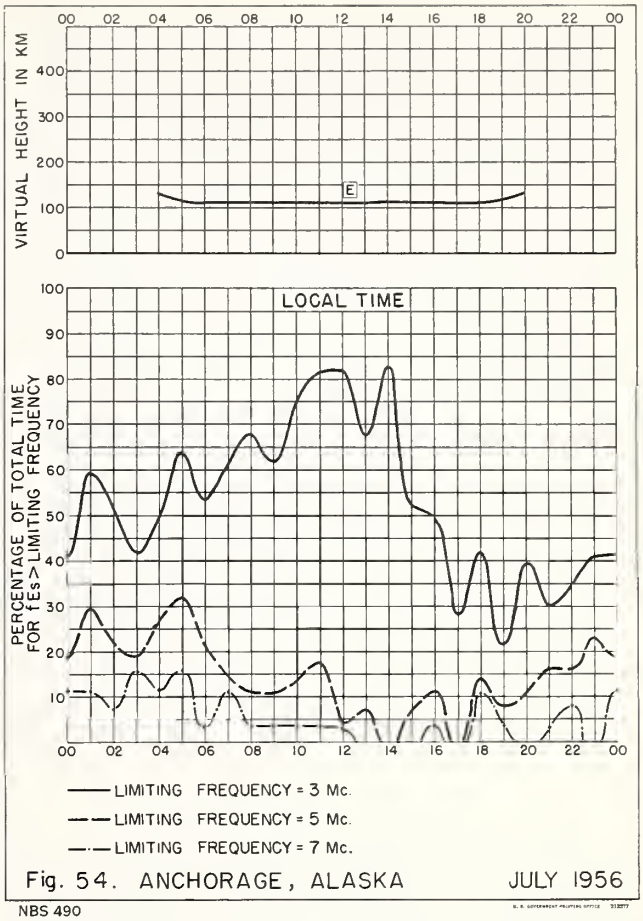

Fig. 54. ANCHORAGE, ALASKA JULY 1956

NBS 490

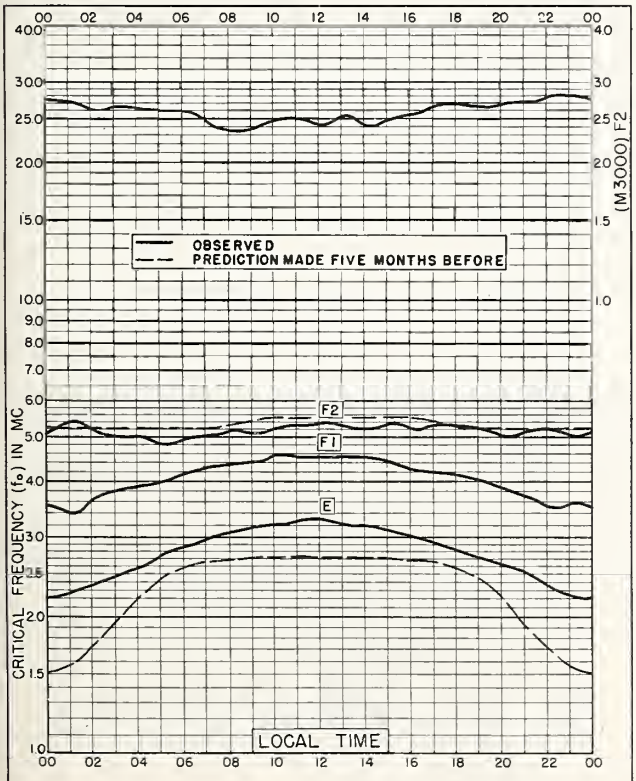

Fig. 55. THULE, GREENLAND
77.0°N, 69.0°W JUNE 1956

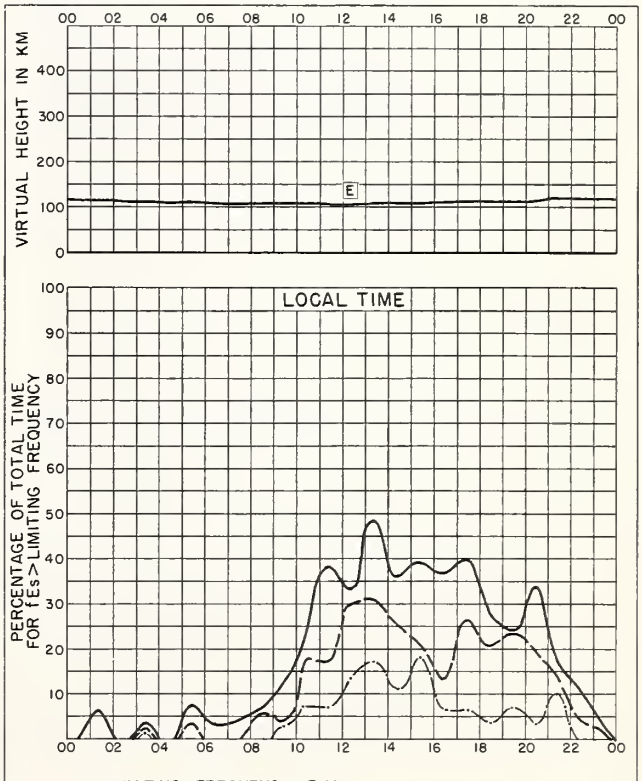

Fig. 56. THULE, GREENLAND JUNE 1956

NBS 490

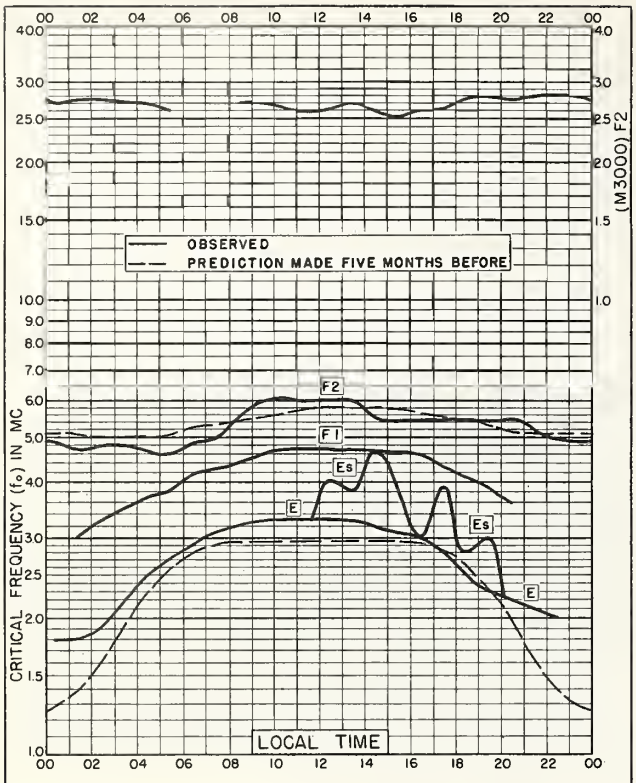

Fig. 57. GODHAVN, GREENLAND
69.2°N, 53.5°W JUNE 1956

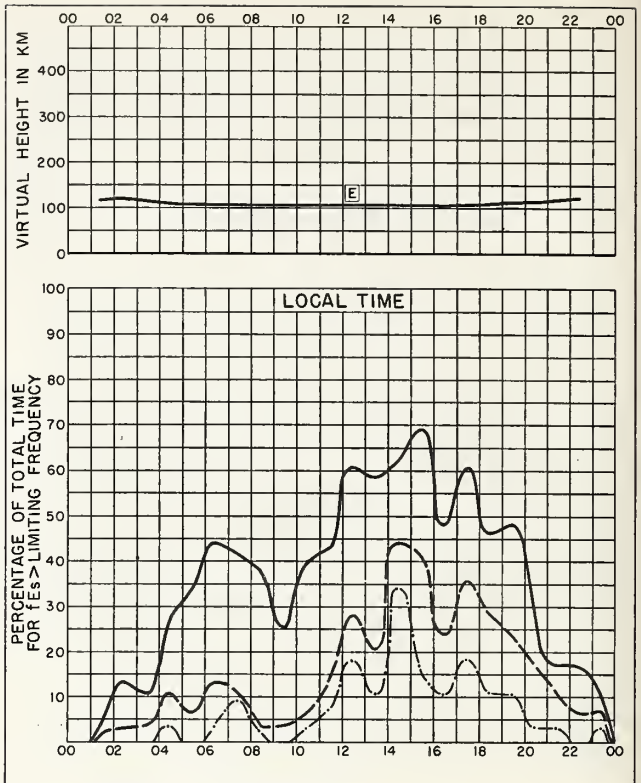

Fig. 58. GODHAVN, GREENLAND JUNE 1956

NBS 490

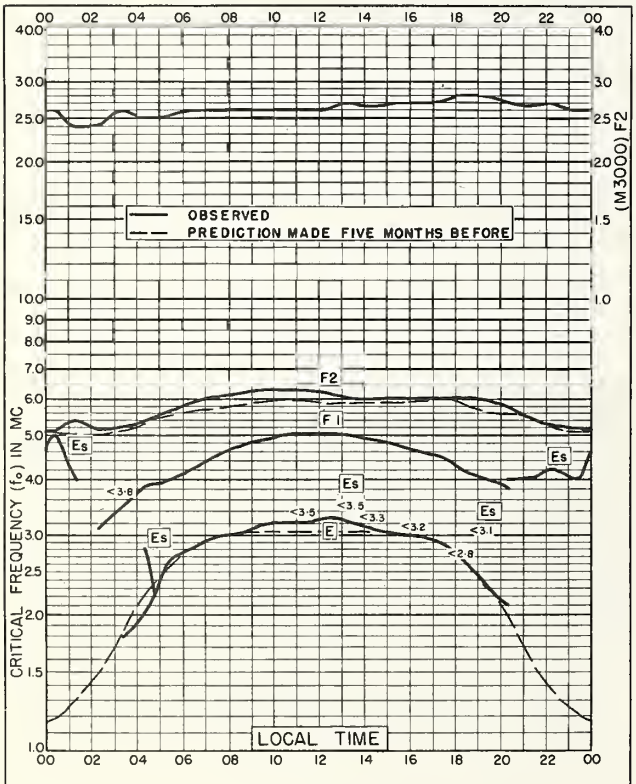

Fig. 59. KIRUNA, SWEDEN
67.8°N, 20.3°E JUNE 1956

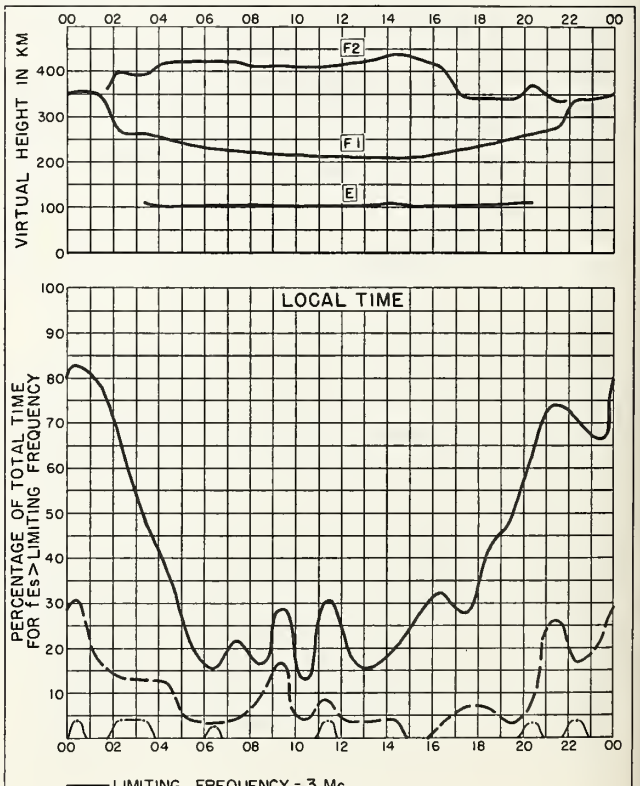

Fig. 60. KIRUNA, SWEDEN JUNE 1956

NBS 490

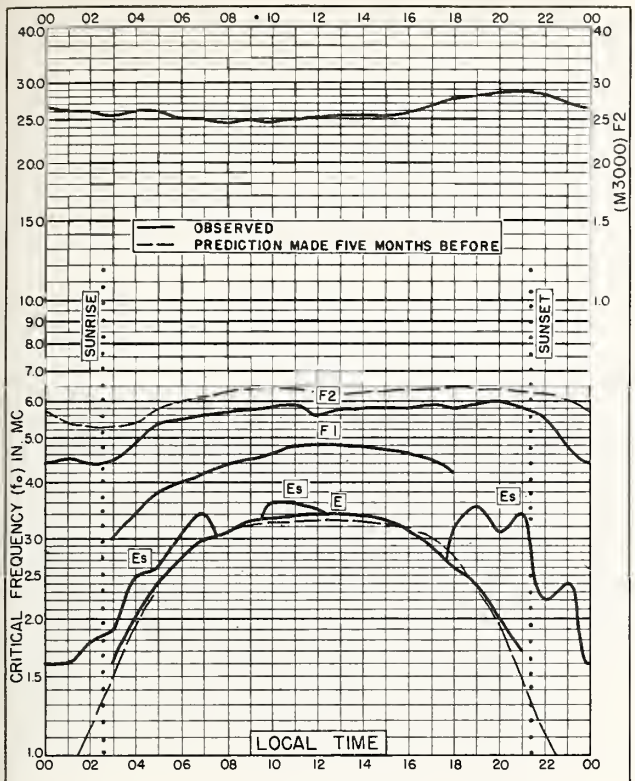

Fig. 61. ANCHORAGE, ALASKA
61.2°N, 149.9°W JUNE 1956

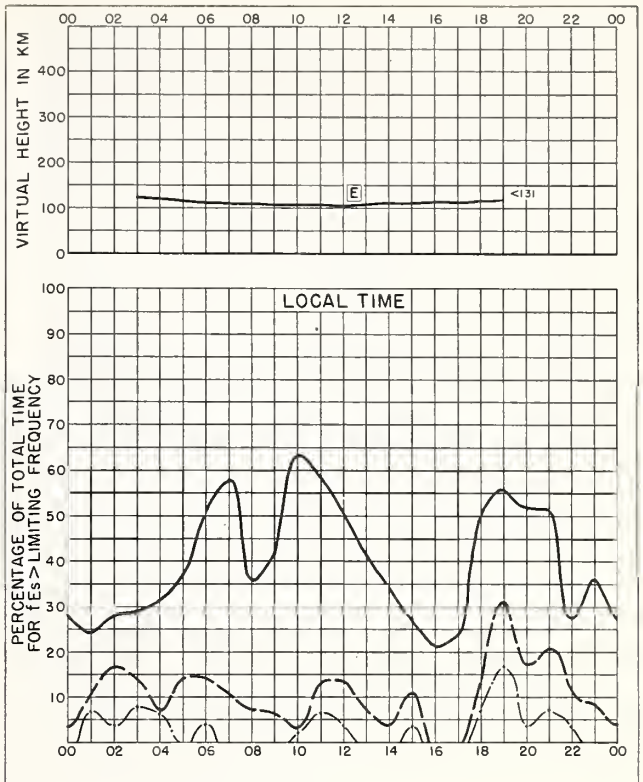

Fig. 62. ANCHORAGE, ALASKA JUNE 1956

NBS 490

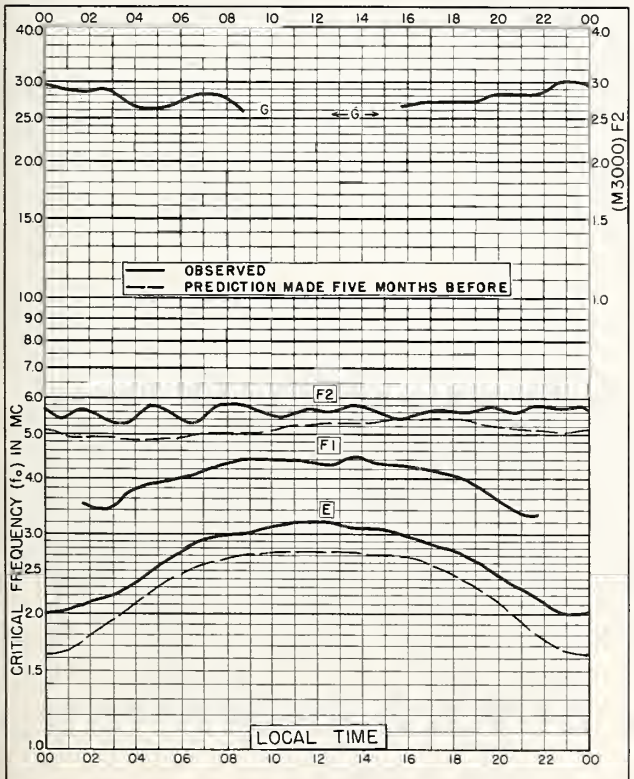

Fig. 63. RESOLUTE BAY, CANADA
74.7°N, 94.9°W MAY 1956

NBS 503

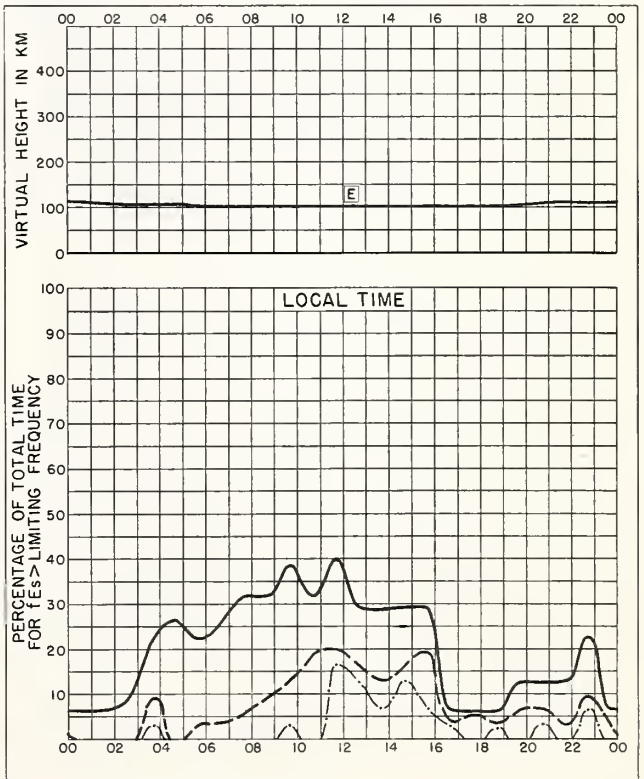

Fig. 64. RESOLUTE BAY, CANADA MAY 1956

NBS 490

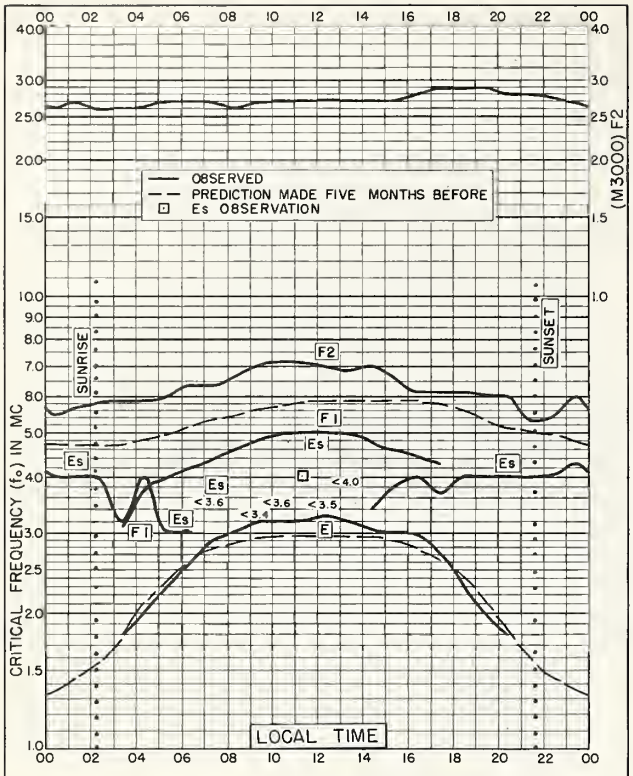

Fig. 65. KIRUNA, SWEDEN
67.8°N, 20.3°E MAY 1956

NBS 503

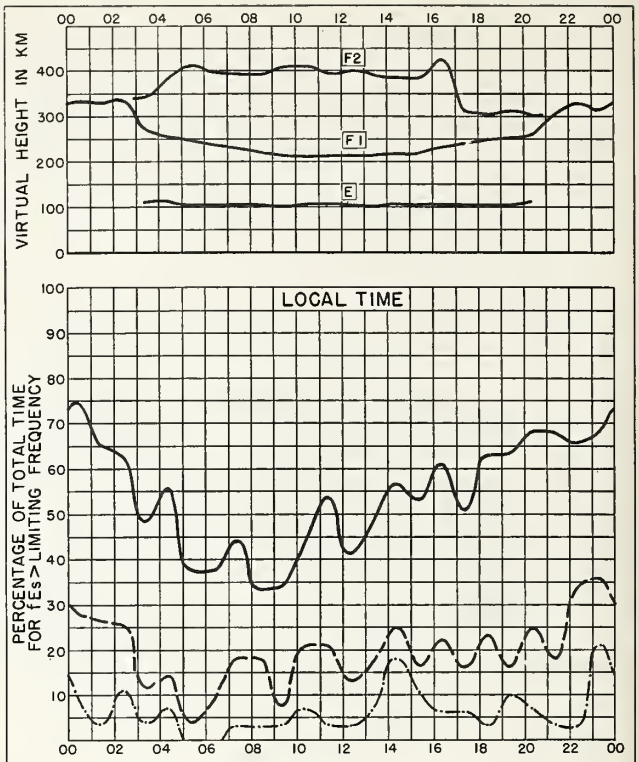

Fig. 66. KIRUNA, SWEDEN MAY 1956

NBS 490

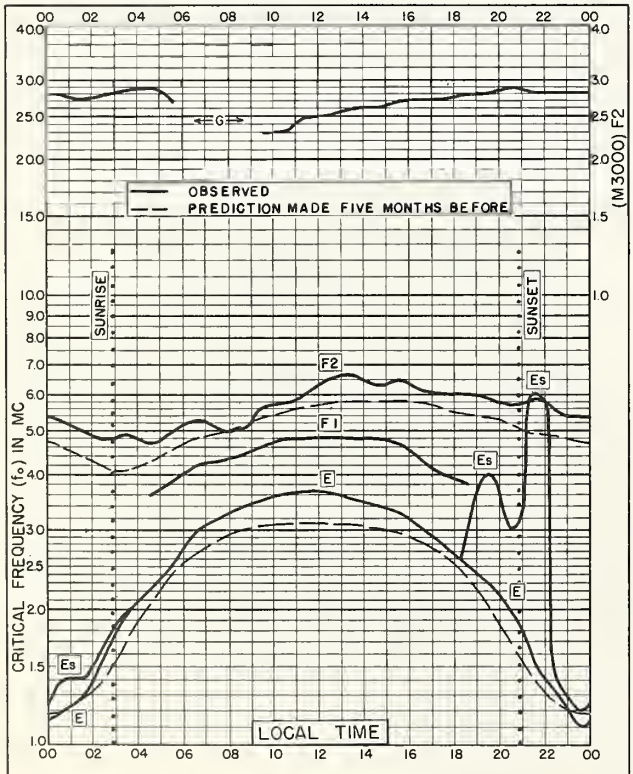

Fig. 67. BAKER LAKE, CANADA
64.3°N, 96.0°W MAY 1956

NBS 503

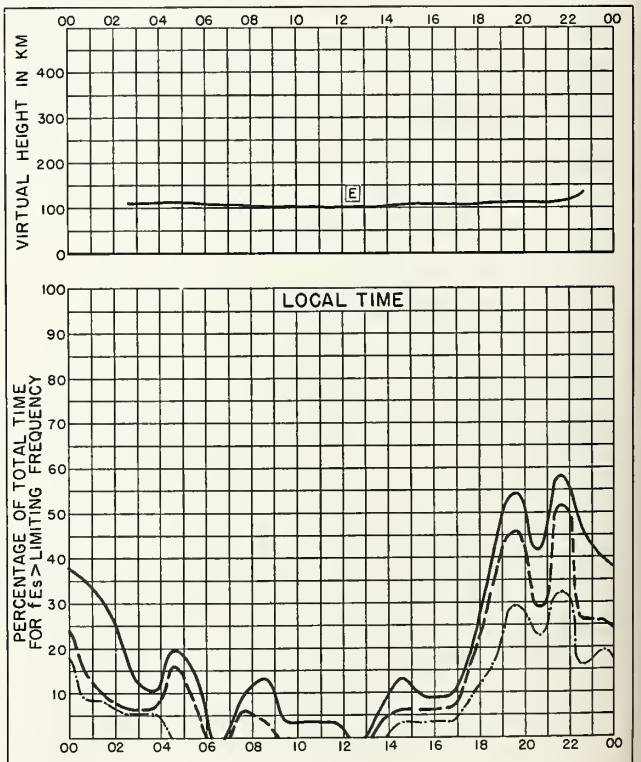

Fig. 68. BAKER LAKE, CANADA MAY 1956

NBS 490

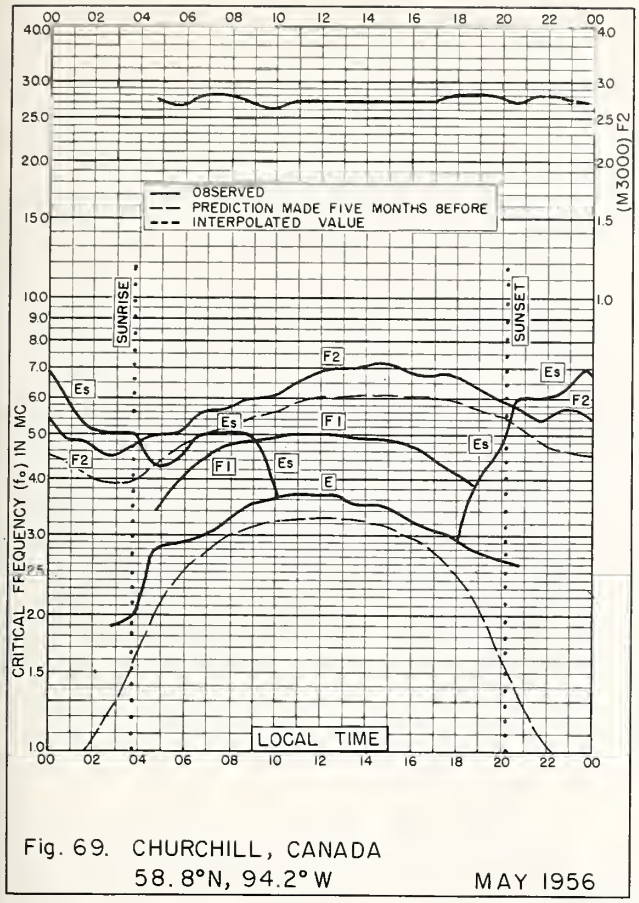

Fig. 69. CHURCHILL, CANADA
58.8°N, 94.2°W MAY 1956

NBS 503

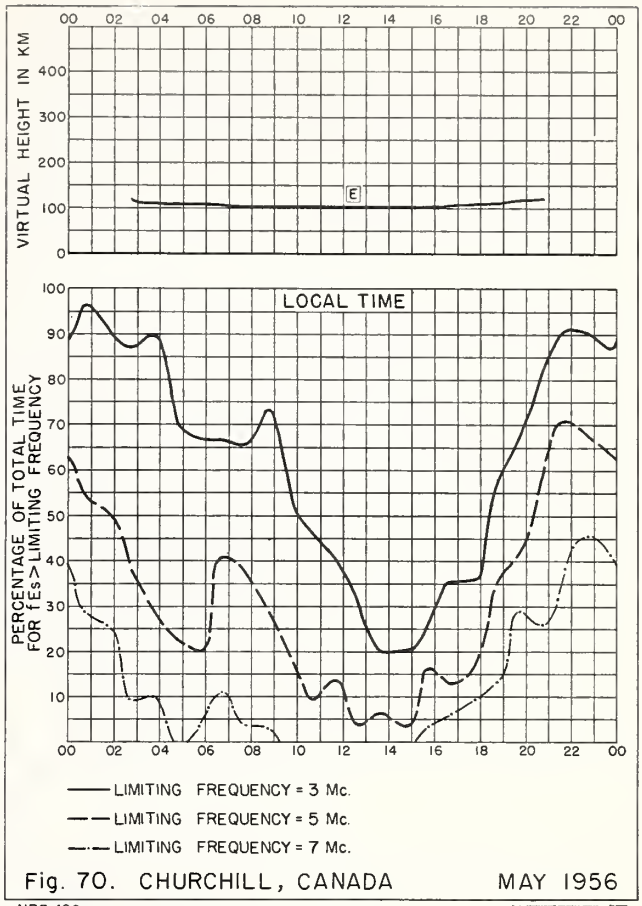

Fig. 70. CHURCHILL, CANADA MAY 1956

NBS 490

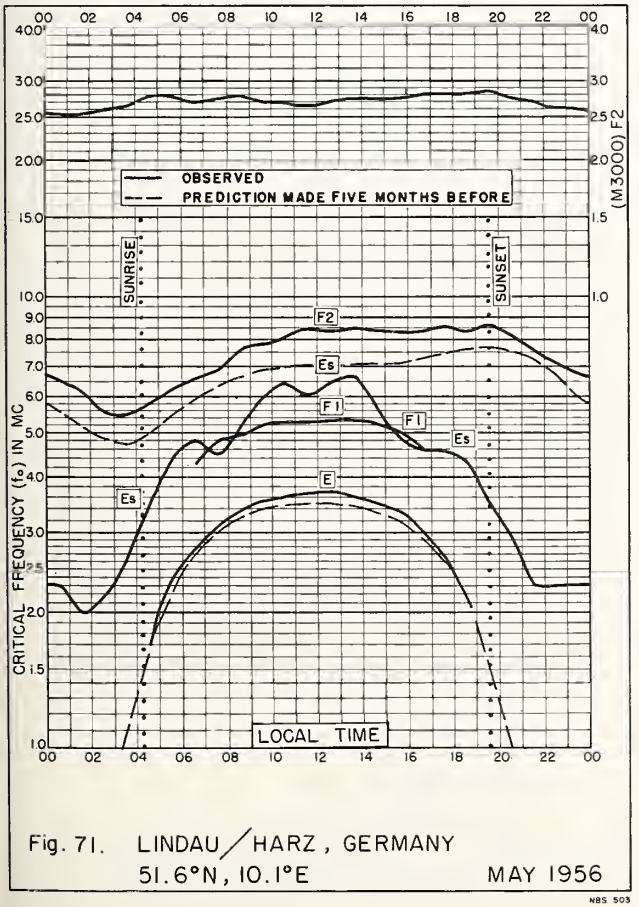

Fig. 71. LINDAU/HARZ, GERMANY
51.6°N, 10.1°E MAY 1956

NBS 503

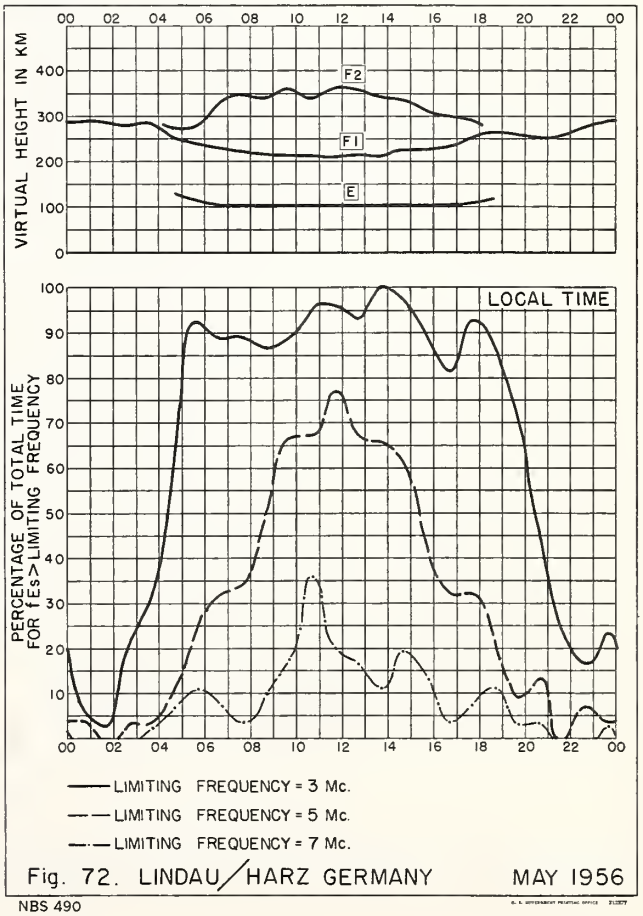

Fig. 72. LINDAU/HARZ GERMANY MAY 1956

NBS 490

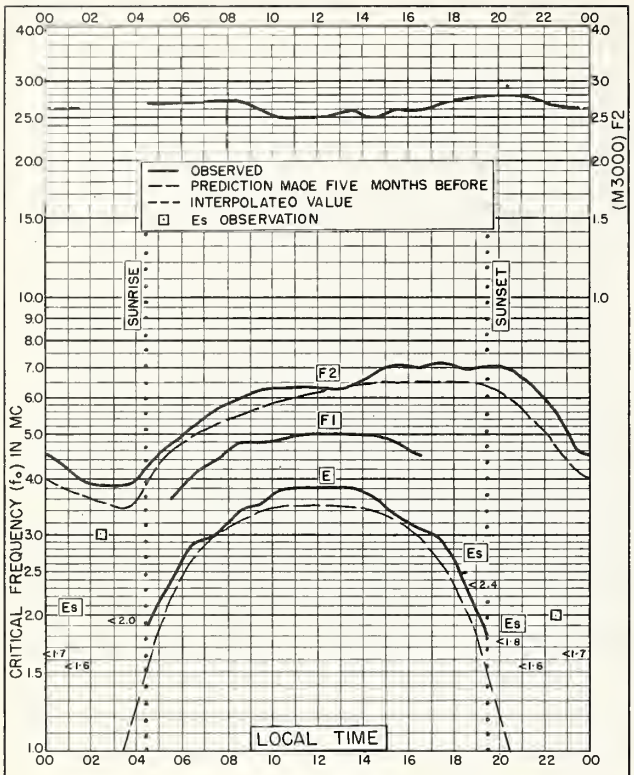

Fig. 73. WINNIPEG, CANADA
49.9°N, 97.4°W MAY 1956

NBS 503

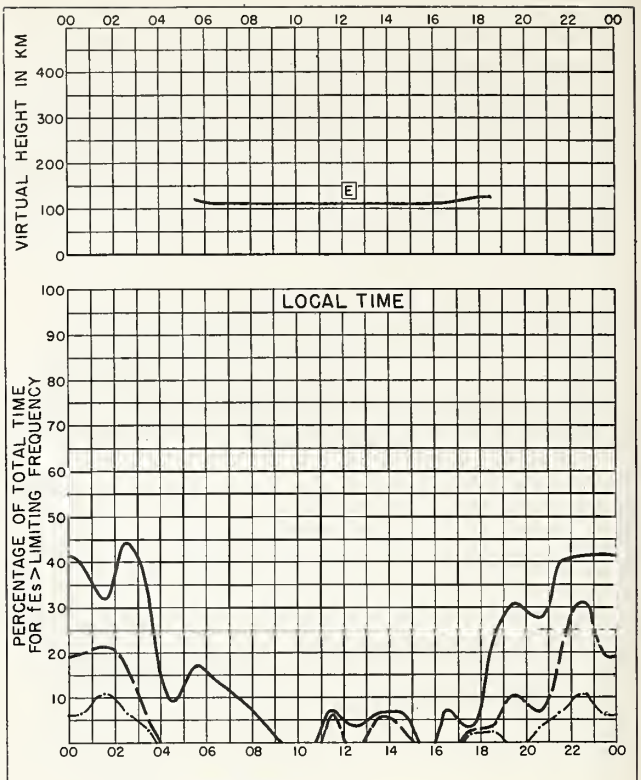

Fig. 74. WINNIPEG, CANADA MAY 1956

NBS 490

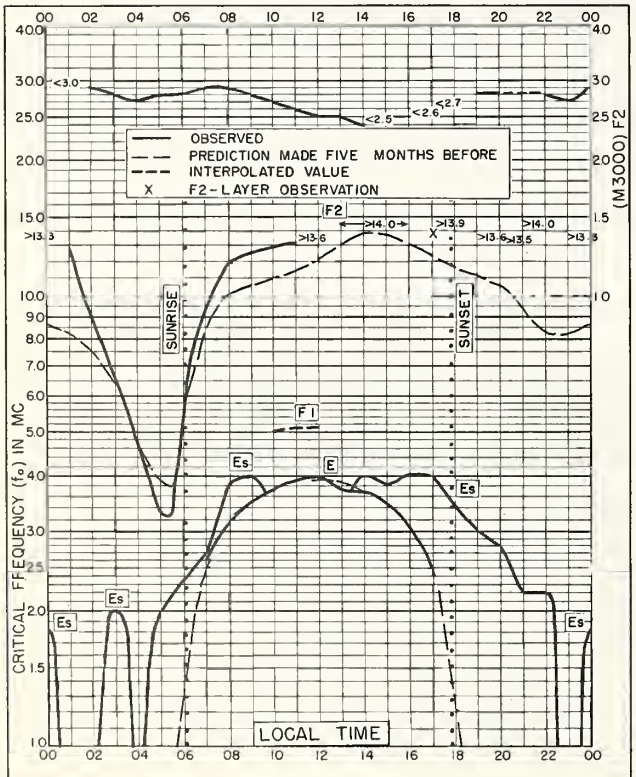

Fig. 75. LEOPOLDVILLE, BELGIAN CONGO
4.4°S, 15.2°E MAY 1956

NBS 503

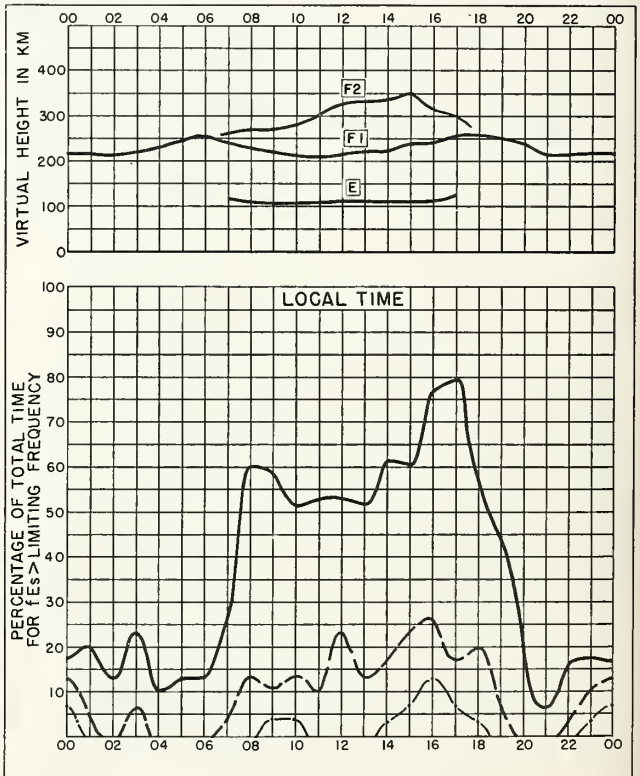

Fig. 76. LEOPOLDVILLE, BELGIAN CONGO MAY 1956

NBS 490

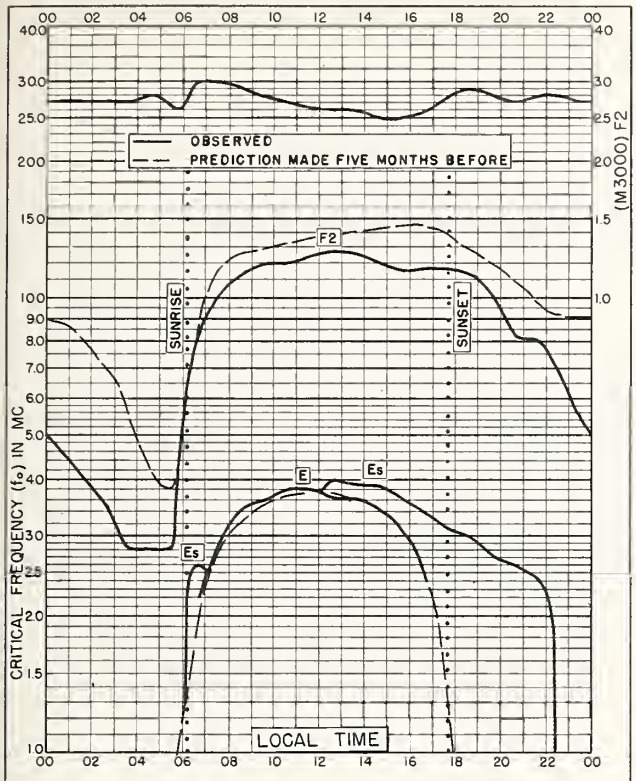

Fig. 77. ELISABETHVILLE, BELGIAN CONGO
11.6°S, 27.5°E MAY 1956

NBS 503

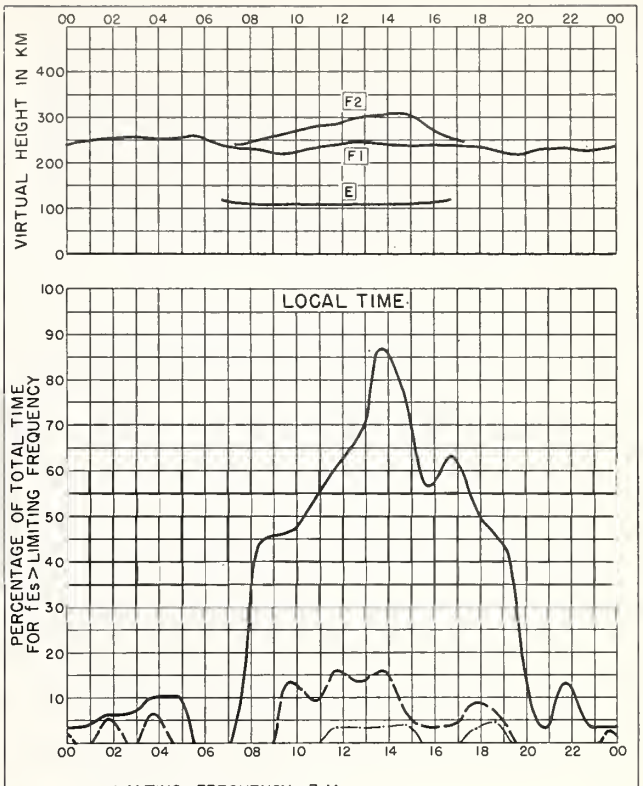

Fig. 78. ELISABETHVILLE, BELGIAN CONGO
MAY 1956

NBS 490

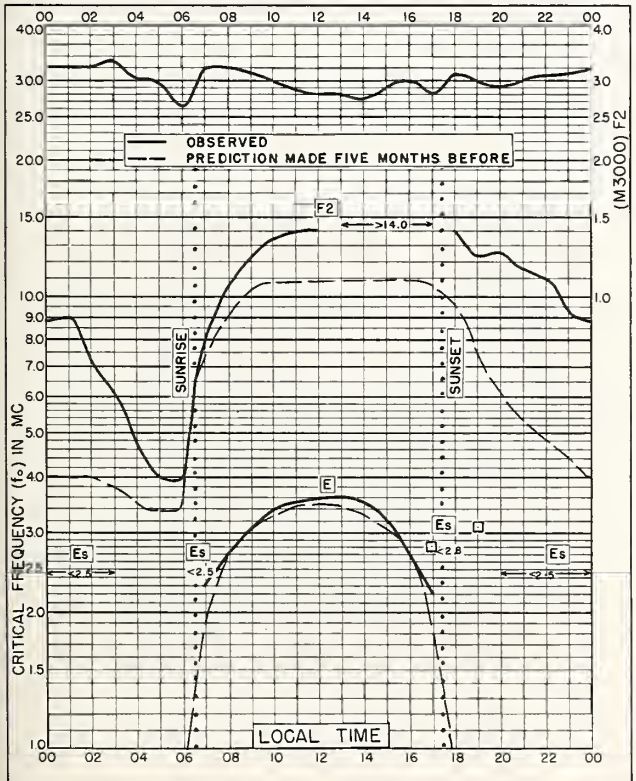

Fig. 79. SAO PAULO, BRAZIL
23.5°S, 46.5° W MAY 1956

NBS 503

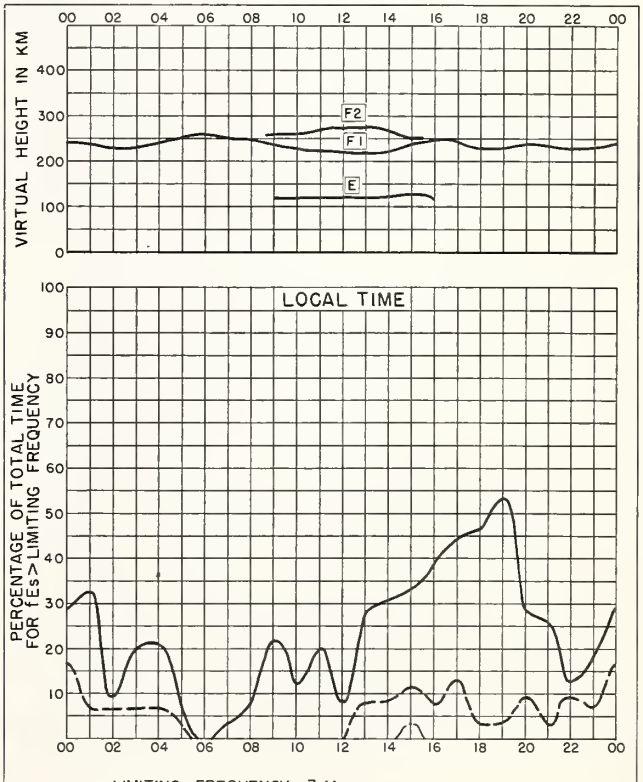

Fig. 80. SAO PAULO, BRAZIL MAY 1956

NBS 490

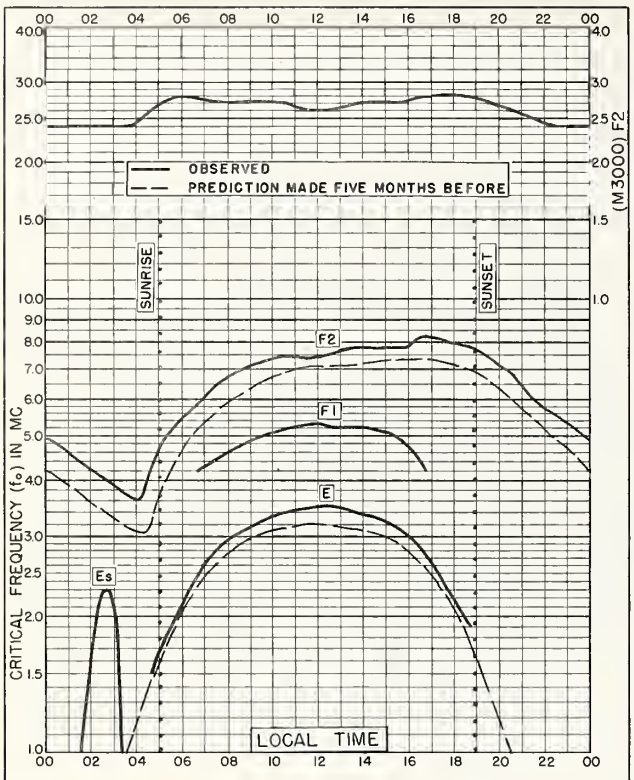

Fig. 81. INVERNESS, SCOTLAND
57.4°N, 4.2°W APRIL 1956

NBS 503

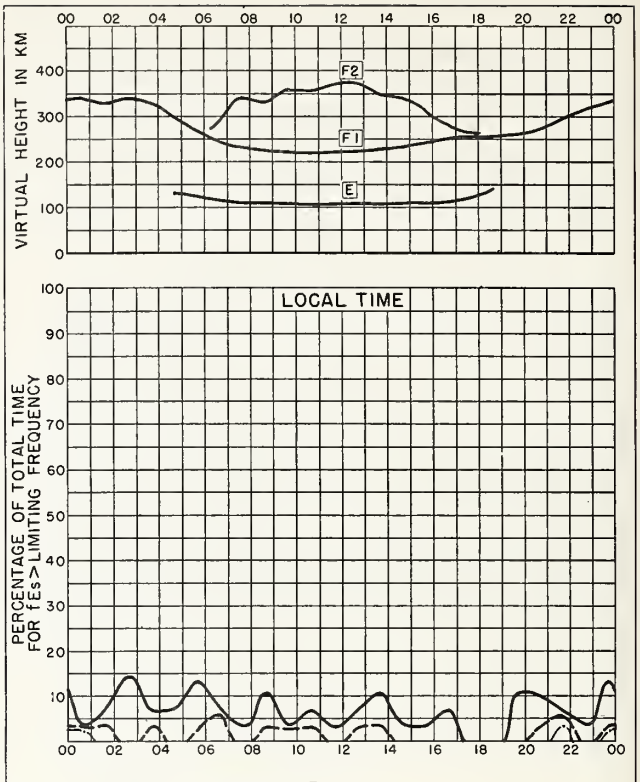

Fig. 82. INVERNESS, SCOTLAND APRIL 1956

NBS 490

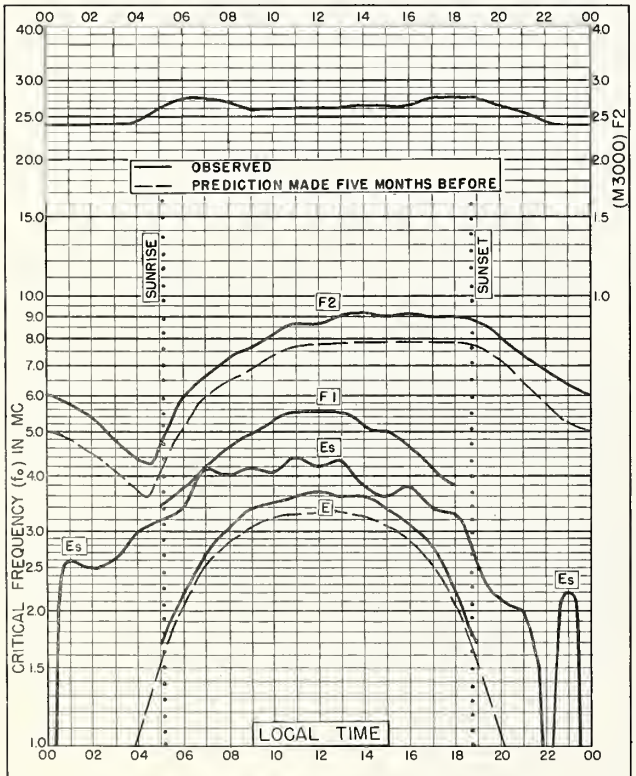

Fig. 83. SLOUGH, ENGLAND
51.5°N, 0.6°W APRIL 1956

NBS 503

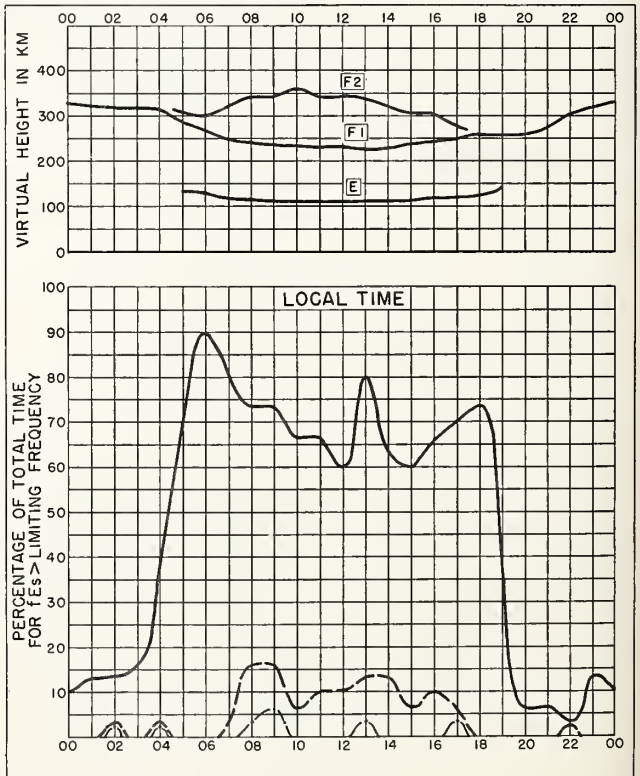

Fig. 84. SLOUGH, ENGLAND APRIL 1956

NBS 490

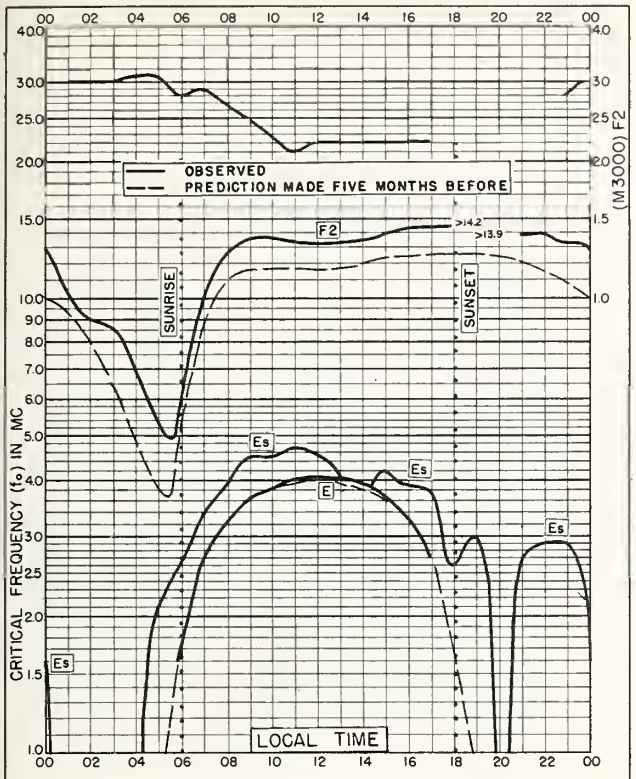

Fig. 85. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E APRIL 1956

NBS 503

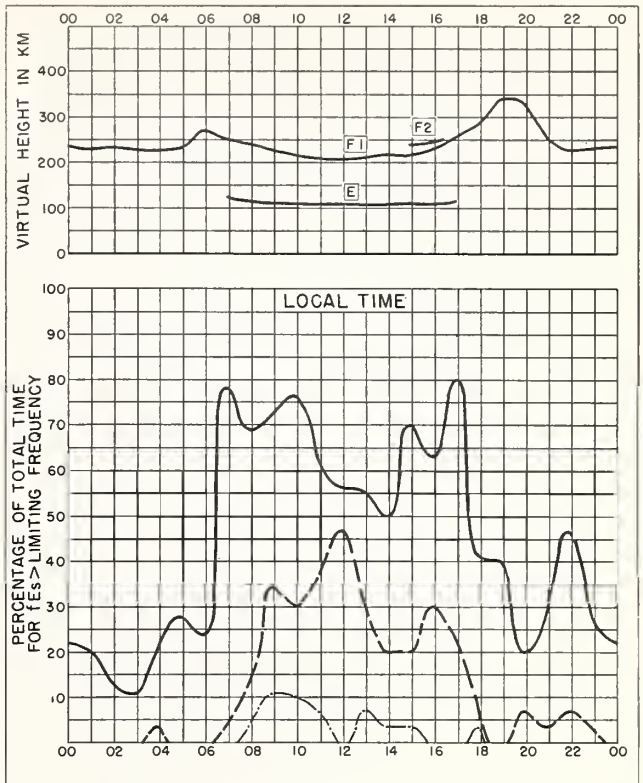

Fig. 86. SINGAPORE, BRITISH MALAYA APRIL 1956

NBS 490

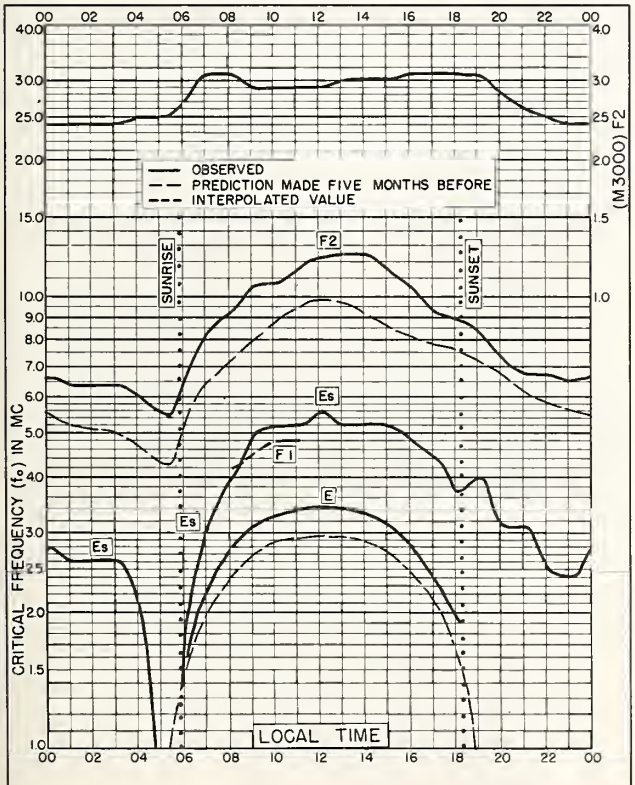

Fig. 87. FALKLAND IS.
51.7°S, 57.8°W MARCH 1956

NBS 503

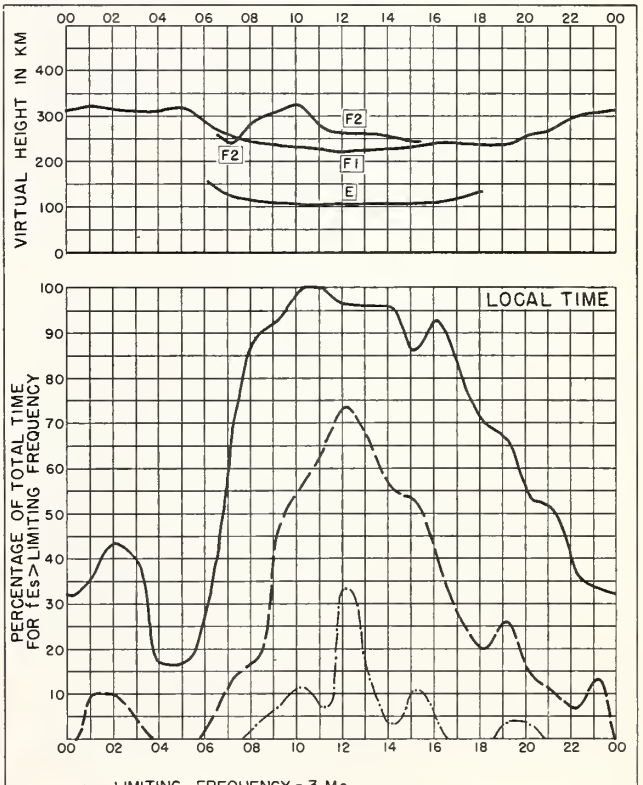

Fig. 88. FALKLAND IS. MARCH 1956

NBS 490

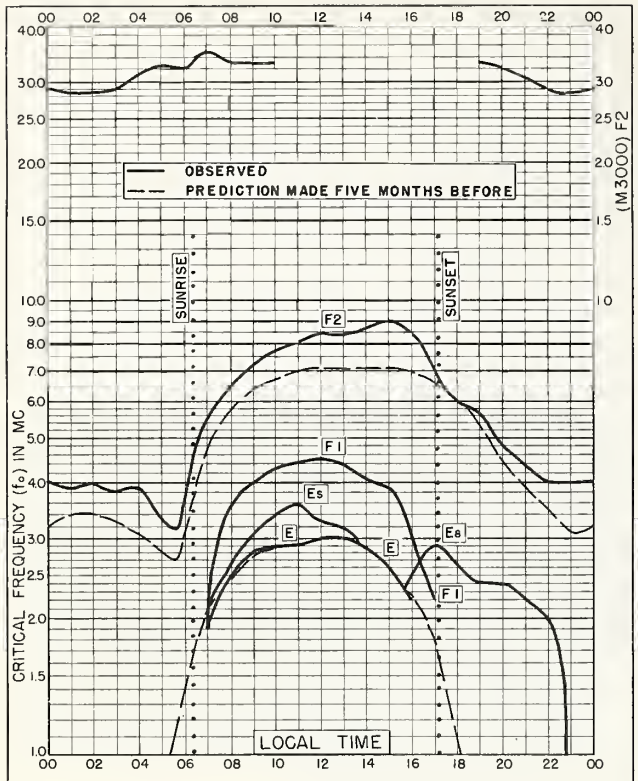

Fig. 89. POITIERS, FRANCE
46.6°N, 0.3°E OCTOBER 1955

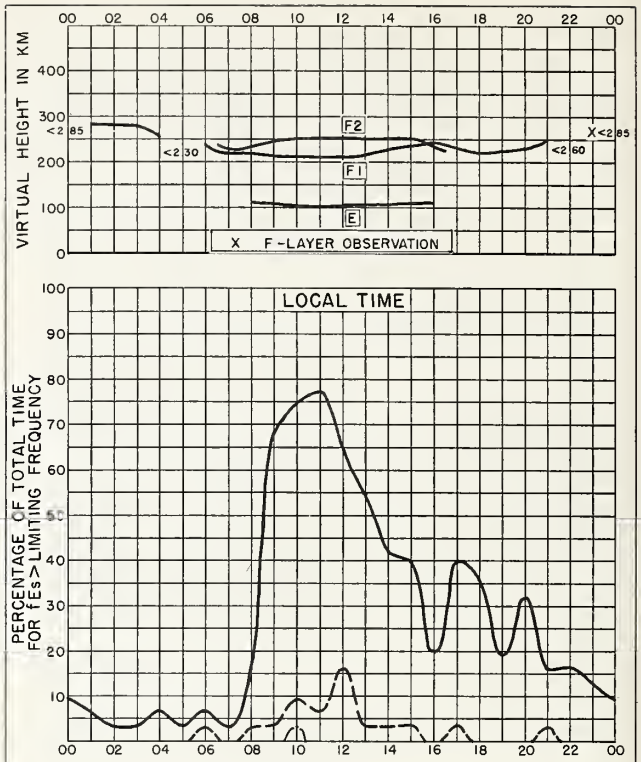

Fig. 90. POITIERS, FRANCE OCTOBER 1955

NBS 490

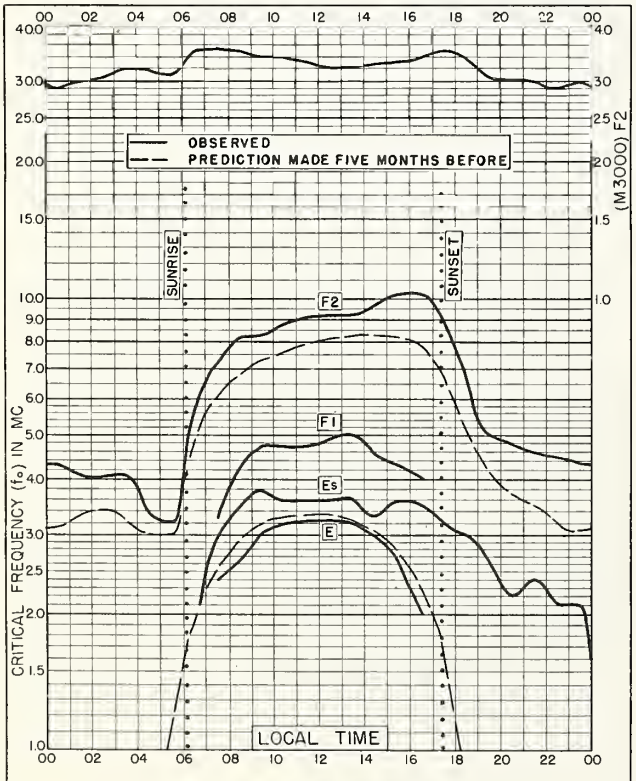

Fig. 91. CASABLANCA, MOROCCO
33.6°N, 7.6°W OCTOBER 1955

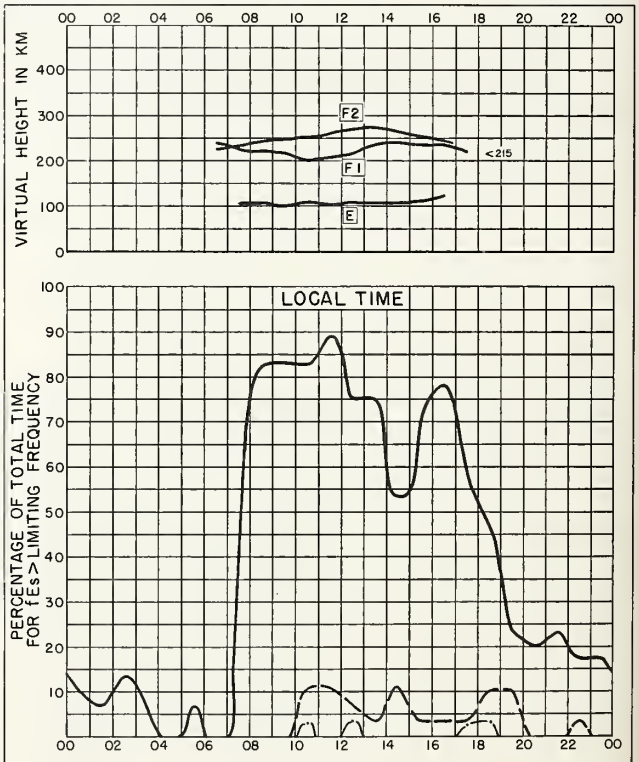

Fig. 92. CASABLANCA, MOROCCO OCTOBER 1955

NBS 490

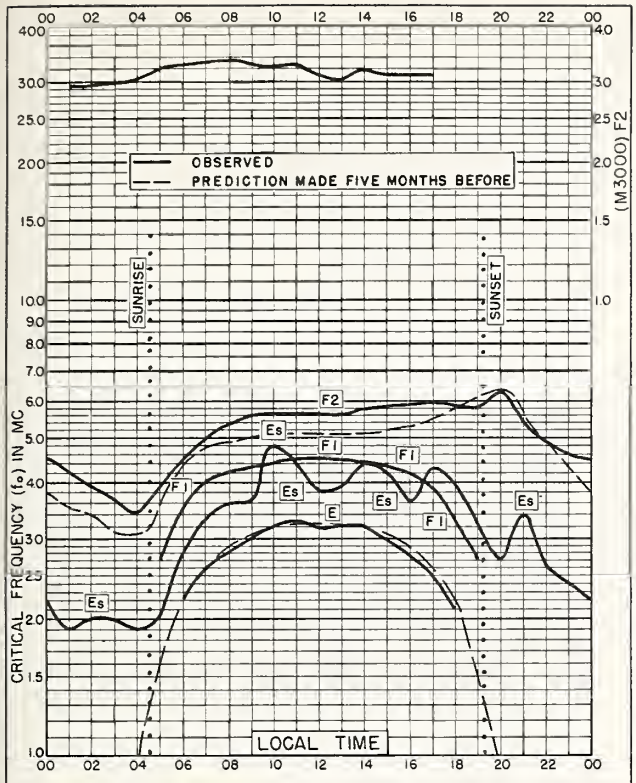

Fig. 93. POITIERS, FRANCE
46.6°N, 0.3°E MAY 1955

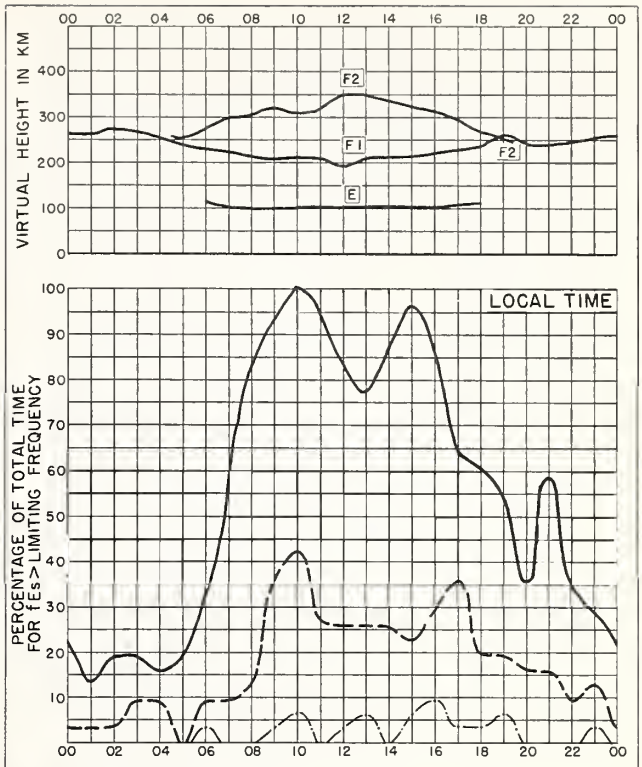

Fig. 94. POITIERS, FRANCE MAY 1955

NBS 490

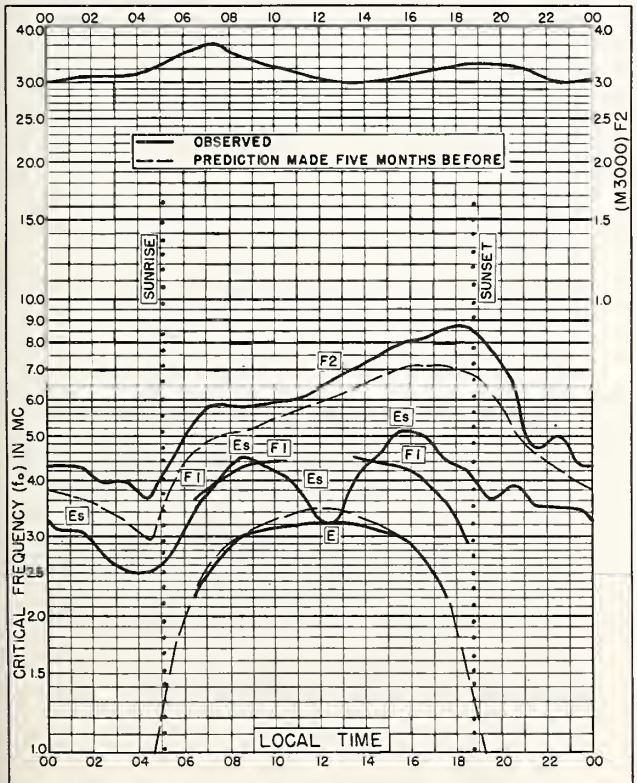

Fig. 95. CASABLANCA, MOROCCO
33.6°N, 7.6°W MAY 1955

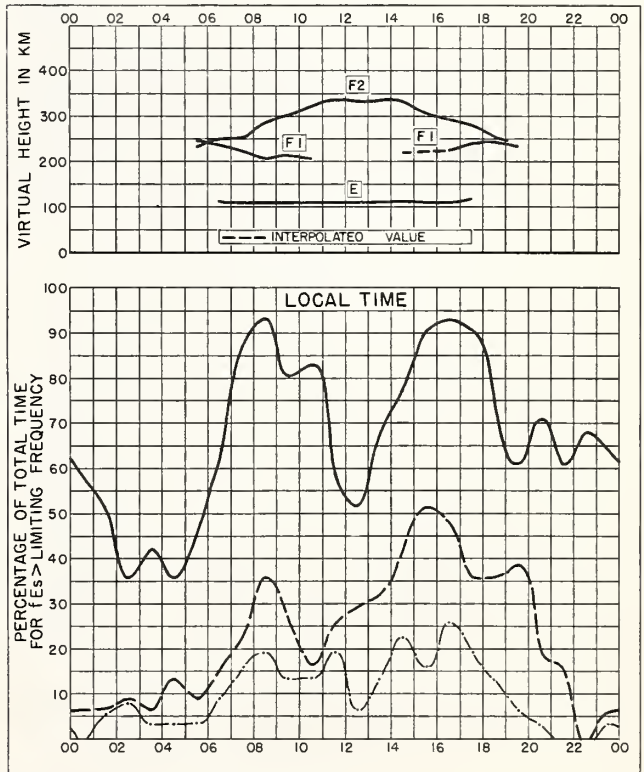

Fig. 96. CASABLANCA, MOROCCO MAY 1955

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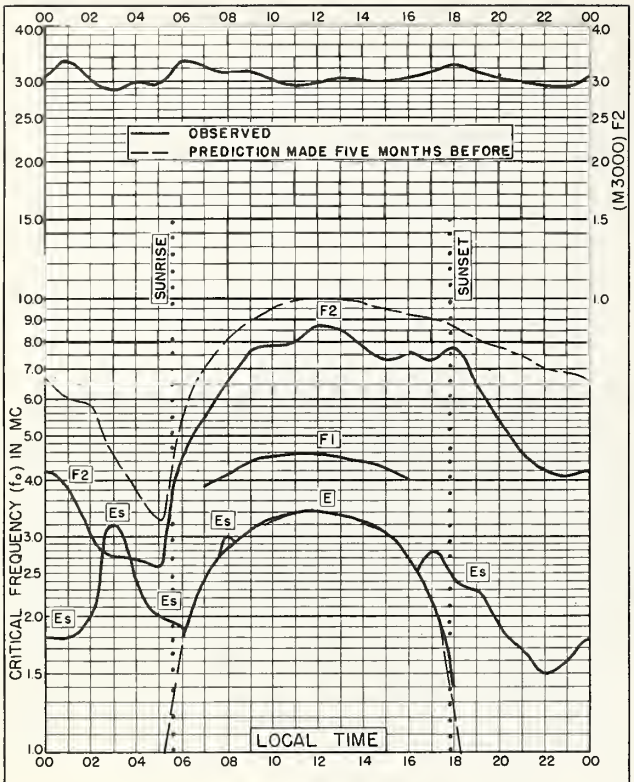
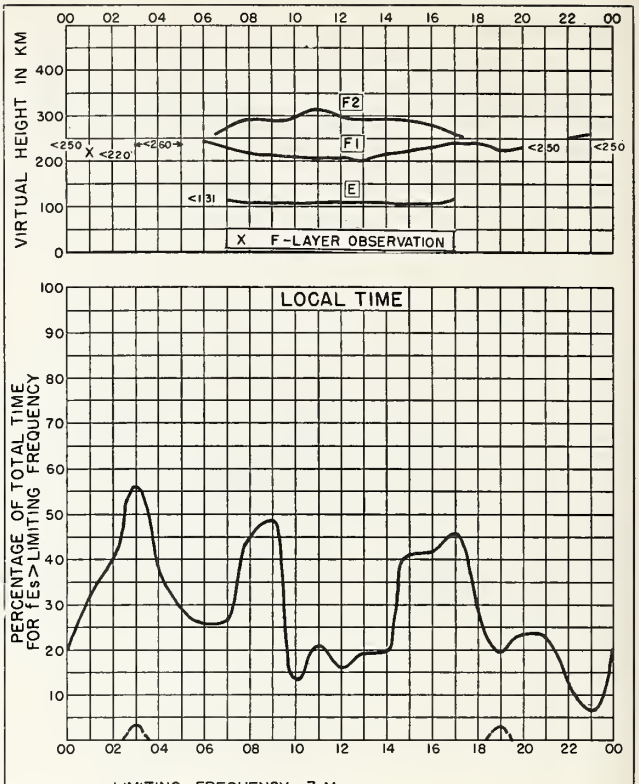


Fig. 97. TANANARIVE, MADAGASCAR
18.8°S, 47.8°E OCTOBER 1954



OCTOBER 1954

Fig. 98. TANANARIVE, MADAGASCAR

NBS 490

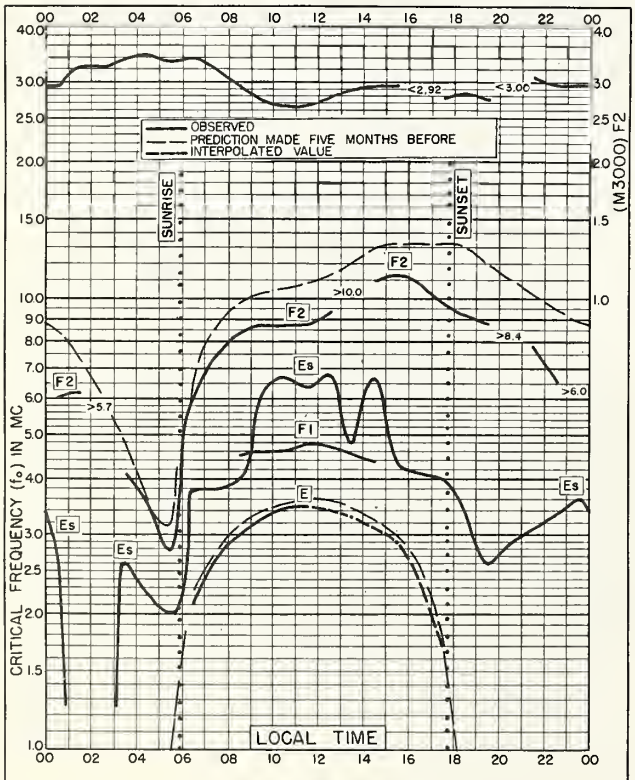
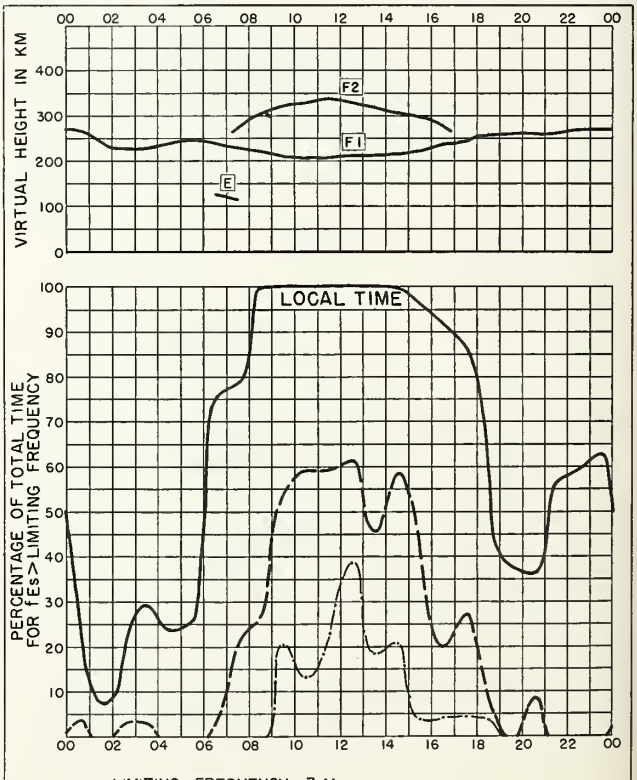


Fig. 99. DJIBOUTI, FRENCH SOMALILAND
11.5°N, 43.1°E OCTOBER 1953



OCTOBER 1953

Fig. 100. DJIBOUTI, FRENCH SOMALILAND

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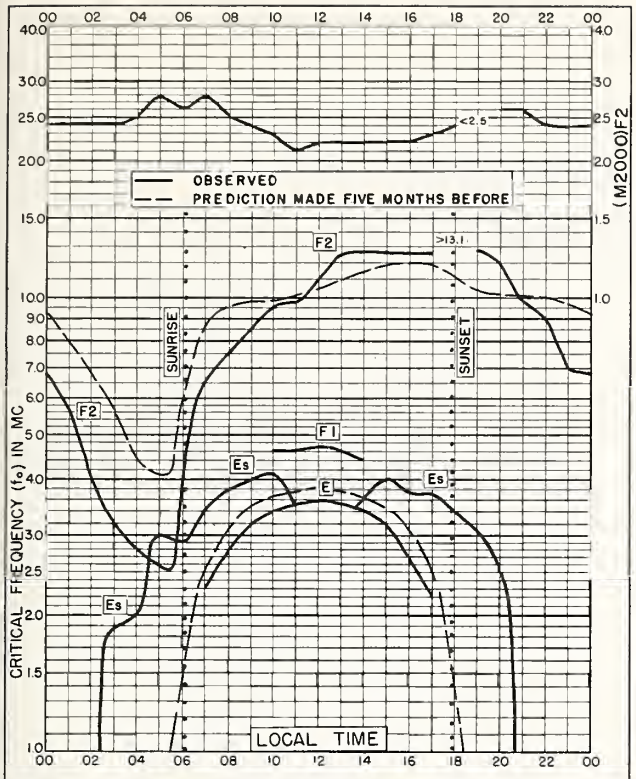

Fig. 101. LEOPOLDVILLE, BELGIAN CONGO
4.4°S, 15.2°E APRIL 1952

NBS 503

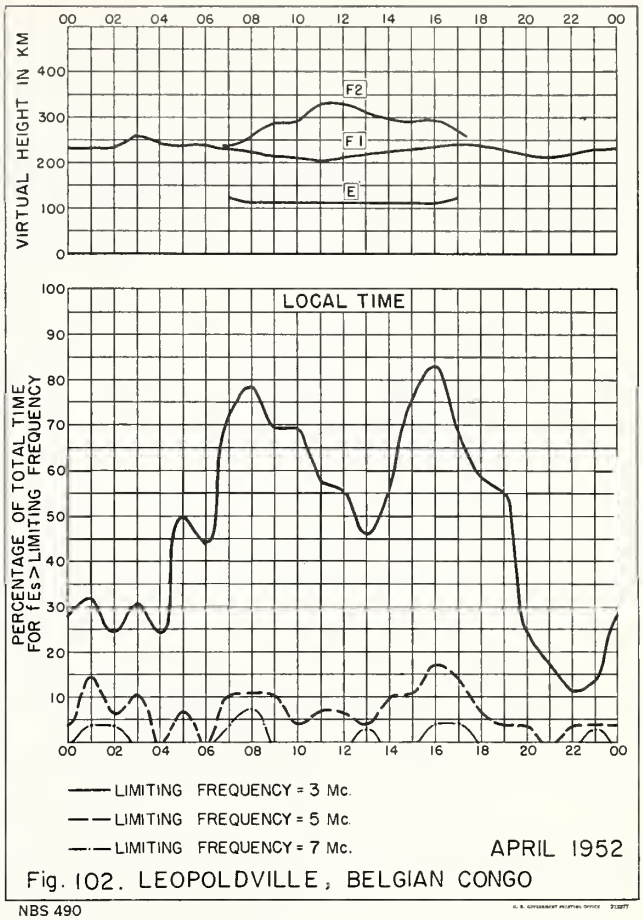

Fig. 102. LEOPOLDVILLE, BELGIAN CONGO
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